DOCUMENT RESUME

ED 065 084 24 HE 003 244

AUTHOR	Feliz, George C.
TITLE	The Regional University Centers: Innovation in Chile.
INSTITUTION	California Univ., Berkeley. Center for Research and Development in Higher Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
BUREAU NO	BR-5-0248
PUB DATE	72
CONTRACT	OEC-6-10-106
NOTE	411
EDRS PRICE	MF-$0.65 HC-$16.45
DESCRIPTORS	*Developing Nations; *Educational Development; Educational Innovation; *Educational Planning; *Higher Education; *International Education; Regional Planning; Universal Education

ABSTRACT

In 1960 a regional college at Temuco, Chile was established to take education to the people of that area and to reach citizens outside metropolitan areas where the only post-secondary institutions were located. In 1961 another regional college at La Serena was established with 6 additional regional centers in operation by 1970. These institutions, now campuses of the University of Chile, have had great impact on the people of the country in offering educational opportunities that were before close to impossible. This study presents the trends, conditions, and problems of the centers during their first decade, and draws heavily on responses from samplings in the centers and their communities. Contents include sections on the origins, functions, and evolution of the centers; their structure, organization, and decisionmaking; their curricula; their instructors, students, and graduates; community and regional relations; budgeting and financial support; perspectives and observations on current issues; and conclusions regarding the founding of a new type of higher education institution. (HS)

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THE REGIONAL UNIVERSITY CENTERS:

INNOVATION IN CHILE

George C. Feliz

ERRATA

p. 108, Table 18 should include under "Secondary school teaching, all specializations," the subject, number, and percentage:

Mathematics	413	4.4

p. 154, Table 35, for the classification "None," figures under columns "Number" and "Percentage" should read 33 and 29, respectively.

p. 271, the last five lines of text on the page should appear directly under Table 95, constituting one continuous paragraph with the remaining lines.

p. 376, Appendix Table A should include, after the name Talca in the first column at the left, names and two rows of figures for regional centers omitted, as follows:

Col. 1, Region: Curico, Talca, Linares, Maule. Col. 2, City: Talca. Cols. 3-11: 80.8; 657.6; 7.4; 18; 4.06; 28.2; 66.2; 40.40; 6.2

Col. 1, Region: Ñuble, Concepción, Arauco, Bío Bío, Malleco. Col. 2, City: Chillán. Cols. 3-11: 77.7; 1,486.2; 16.7; 78; 11.81; 23.7; 65.4; 57.80; 18.8

CENTER FOR RESEARCH AND DEVELOPMENT IN HIGHER EDUCATION

University of California, Berkeley

1972

FOREWORD

Slightly more than a decade ago, the University of Chile took a bold step toward equalizing opportunity for education beyond the secondary school. Cognizant of the severe inequities that must obtain (particularly for those from lower socioeconomic backgrounds) when a national university is located far from where secondary school graduates live, certain leaders in the university recommended the establishment of a Regional College at Temuco in 1960 and another at La Serena in 1961. The impact of these two Centers was felt almost immediately, and as a result six additional ones were planned. By 1970, all eight Centers, by then legally designated sedes of the university, enrolled more than 10,000 students and constituted an example of decentralization that may be regarded as a major innovation in Latin American education.

The Ford Foundation early became interested in the Chilean Regional Colleges, and over the last ten years has assisted them in a variety of ways, including help in the training and upgrading of their staffs and the development of their curricula. To facilitate the Foundation's program, the Center for Research and Development in Higher Education at the University of California, Berkeley, was invited to participate, and the Center has been associated with the project since 1961.

This report was prepared at the Center's request by Dr. George Feliz while on leave from San Francisco State College. Dr. Feliz vividly records the development of the Chilean Regional Colleges and the problems they faced over an historic ten-year period during which the university underwent general reform and Chile as a whole was characterized by political change. All those interested in the world-wide movement of improving access to higher education through new institutional forms should find Dr. Feliz's report of interest and help.

Leland L. Medsker
Director
Center for Research and
Development in Higher
Education

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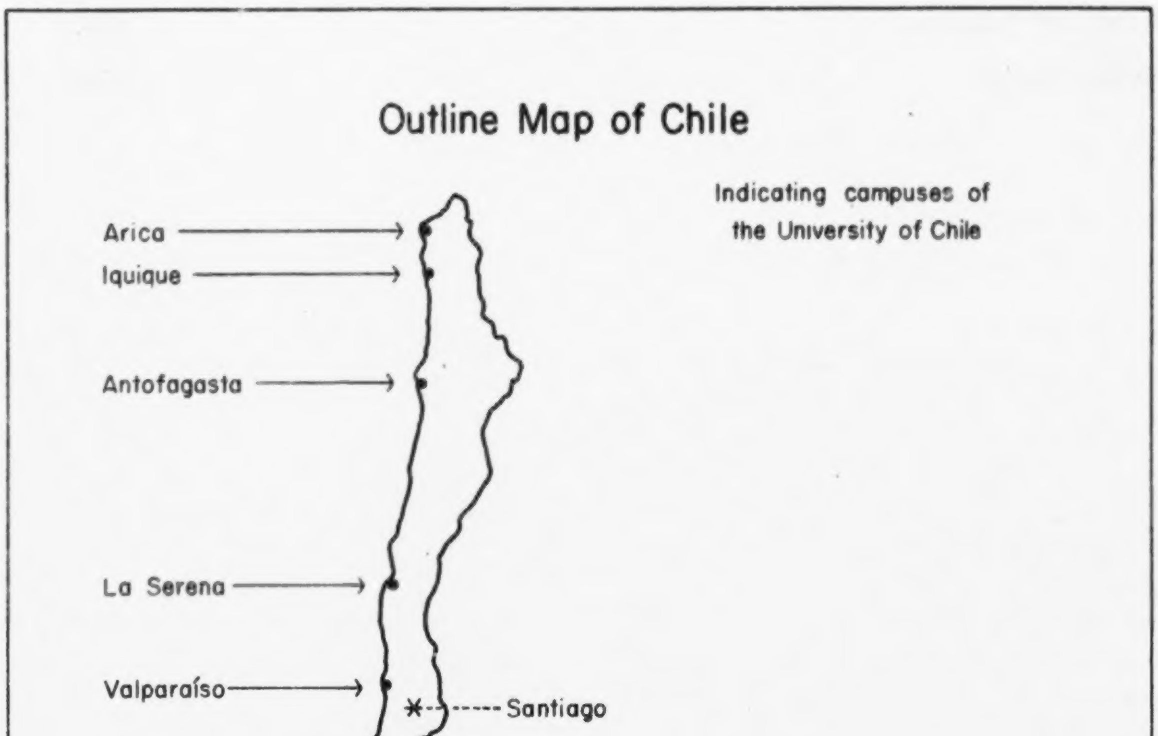

Outline Map of Chile

Indicating campuses of the University of Chile

Arica
Iquique
Antofagasta
La Serena
Valparaíso
Santiago
Talca
Chillán
Temuco
Osorno
Strait of Magellan
Cape Horn
Chile

ACKNOWLEDGMENTS

This research on the University of Chile Centers in the provinces was one phase of the cooperative project of the University of Chile and the Center for Research and Development in Higher Education of the University of California at Berkeley during 1961-1971. After completing a research feasibility survey in Chile during November and December 1968, I returned to plan and carry out the field inquiry during 14 months of 1969-1970.

To the extent that this study depicts the significance and features of the Regional University Centers in the Chilean setting, a considerable part of the credit should go to the hundreds of Chileans who contributed opinions and information. I deeply appreciate the cooperation and assistance of the directors, coordinators, program and departmental chairmen, instructors, students, and non-academic personnel of the Centers. I extend my thanks to parents of students, and to civic leaders, officials, and others in the provinces who gave generously of their time and thoughts by participating in this inquiry. The engagement of these individuals was itself an indication of a high measure of their involvement and concern for the program of educational development in Chile.

Ruy Barbosa, rector of the University of Chile during most of my stay in Chile, provided invaluable support and comments related to the study. The Coordinating Department of the University Centers in the latter part of 1968, and the subsequently formed Technical Secretariate of the University Centers during 1969 and the early months of 1970 were indispensable sources of information, advice, and assistance. Marino Pizarro, director of the Technical Secretariate, assisted in furthering the study and submitting to numerous interviews. For their meticulous answers to my continual flow of questions, and for their counsel in designing the instruments used in the study, I am especially indebted to Emma Sálas, Ramón Sepúlveda, Lucía Yzoard, and Fernando Aranda. All members of the staffs were responsive to my requests for information and assistance.

Many others associated with the University of Chile in Santiago cooperated in the advancement of the research. Ramón Rodriguez was especially helpful in facilitating arrangements for the field inquiry. A number of deans, professors, and other staff members responded graciously to requests for interviews and assistance. The late Oscar Vera, then Director of the Office of Planning, contributed important suggestions and information. Juan Gómez Millas, former

rector, shared freely his recollections and insights. Raúl Bitrán gave me his counsel and fresh perspectives on various occasions. Irma Sálas, now retired from the university but highly active in educational work, provided much information and helpful advice. I am indebted to her for reading and commenting on a substantial portion of the manuscript.

Numerous other persons and organizations in Chile guided me to sources of information and explained various aspects of Chilean education, development, and life. John Netherton and his staff in the Santiago office of the Ford Foundation were consistently supportive and helpful. Barclay Hudson offered a number of useful suggestions, and in a later stage of the project, reviewed the manuscript and wrote comments which resulted in subsequent improvements. I acknowledge with thanks assistance from officials and staff members of the Ministry of Education, National Development Corporation, National Office of Planning, United Nations, Council of Rectors of Chilean Universities, and various other institutions of Chile.

At Berkeley, Leland Medsker, Director of the Center for Research and Development in Higher Education, gave his complete support and encouragement throughout the study. As a principal participant in the project with the University of Chile, and as one versed in the development of the University Centers, he was especially helpful in the initial planning of the research and in making criticisms and suggestions concerning the final chapter.

In Chile I was fortunate to have a highly motivated and competent staff. Ana María Pinto contributed substantially as a researcher, analyst, and critic. She participated in the planning and on-going evaluation of the study, coordinated most interviewing in the provinces, and supervised the coding, classifying, and preliminary tabulation of primary data. Gloria Wyss assisted me patiently and well as a bi-lingual secretary and a general assistant.

The editing, secretarial, and clerical staff at the Berkeley Center have been most helpful, thorough, and properly exacting during the trying stages of completing the manuscript and preparing it for final presentation.

Anne Carmichael Feliz, my wife, merits special words of appreciation and thanks. She accompanied me in my field work throughout Chile and maintained a spirit of empathy, confidence, and encouragement during the entire project. She also reviewed the manuscript and suggested improvements.

The aid of the Ford Foundation, which financed this research and provided various services and facilities in Santiago, is gratefully acknowledged. I am appreciative, too, of San Francisco State College for granting me the leave necessary to do this work.

George C. Feliz

CHAPTER 1

INTRODUCTION

The Regional Colleges of the University of Chile were created during the decade of the 1960s and constituted a striking move away from the traditional patterns of higher education in Chile, and indeed in Latin America. Eight of them were launched in the highly varied regions north and south of the metropolitan area of Santiago; as a chain of campuses which stretched approximately 2,000 miles, the Regional Colleges extended opportunity for higher education and career preparation to many students in the provinces, as well as bringing new and more extensive experiences in cultural and developmental activities to the regions. The Regional Colleges, whose identity and form changed twice during their first decade, represented an unprecedented and major thrust by the University of Chile to reach the people of the provinces, outside and far beyond the central zone dominated by Santiago.[1]

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[1] Inasmuch as many terms have been used to identify this new type of institution, some explanation is advisable for the sake of clarity. University decrees referred to them at first as colegios universitarios regionales, or Regional University Colleges. Latin American countries do not have any counterpart of the English and U.S. colleges. The word colegio customarily has signified a secondary school or merely any school, but usually not a postsecondary institution. In the context of the Regional College development, however, the term designated an institution which included the offering of a continued general education. The word universitario implied that the functions and programs of the new institutions would be comparable to or related to those of a university. Regionales refers to the location and services of the Colleges in various provinces or regions.

Consideration will be given in Chapter 2 to the events and meaning of the transitions of the colegios universitarios regionales to centros universitarios (university centers) and from the latter to sedes (freely translated as "branches" or "campuses") of the University of Chile.

Strictly, it is not appropriate to refer to these as "institutions." They are part of the University of Chile; in fact, now they are the University of Chile in their respective locations. For convenience in writing, and to avoid tedious repetition of titles, the word "institutions" is used occasionally in the text to refer to these educational segments.

As in the majority of Latin American countries, Chile has a concentration of population and economic activity in a few centers, notably the capital city. What is not characteristic is the great extension of the country in one dimension and its geographical isolation. The complete territory is 2,600 miles long and only 56 to 250 miles wide. The formidable barrier wall of the Andean cordillera extends along the eastern border; a great desert in the northern zone, and a fjord-and-mountain terrain in the south complicate transportation, agriculture, and other phases of economic development. This unique geography is significant in all aspects of Chilean life. (See map).

A prominent Chilean (Díaz, 1964, p.5) has asserted that the national program of economic development is based upon the fundamental premise that education, professional preparation, and technical training are requisites for achieving established goals.

Economic development implies growth in the real product of goods and services, and improvement in the well-being of the people. In Chile during recent years programs of industrialization, agricultural development, and land redistribution have had only modest success at best. Population growth, urbanization, and pressures for social change have added substantially to the immediate complexities of economic development. Aside from the stability of electoral processes in Chile, perhaps the most auspicious factor for a long-term development is the comprehensive effort to strengthen her human resources through educational expansion and reform.

FEATURES OF THIS STUDY

This study is partly an attempt to trace and analyze the development of the Regional Colleges, their transition to University Centers, and recently to sedes (campuses) of the University of Chile.[2]

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[2] Throughout this work Chilean institutions and terms will be given together with the English translations when they are first used. Occasionally thereafter, especially in the case of institutions and organizations, the Spanish phrasing will be used. A number of terms, if given a literal translation into English, would not result in the same meaning. In such cases I have used words which in usage have the same meaning in English as does the Chilean term in Spanish.

The principal focus is upon the Centers as they were in the latter part of 1969. The preliminary feasibility survey, the field inquiry, and the coding and tabulation of results were completed in Chile during the period of November 1968 to April 1970. Considerable attention is given to historical features; however, the emphasis is upon the change and evolution of the Regional Colleges rather than a chronicle of events. A statement of the objectives and methodology of this study is contained in the Appendix.

It is my view that generalizations about educational developments lack meaning when reinforcing evidence does not accompany them; I have therefore presented considerable supporting material. The need for such evidence is especially pressing in a treatment of higher education in Latin America, since this area has for many years been criticized by Latin Americans themselves.[3]

I do not wish merely to record policies and actions which affected the Regional Colleges and, subsequently, their successors the University Centers (centros universitarios) of the provinces. I intend to deal with the motivations for the establishment of a new type of Chilean institution, with its functions and distinguishing features, and with the policies and problems which influenced its course during the decade of 1960 - 1969. In considering the structure and the programs of the Regional Colleges and the University Centers, I have emphasized the eight campuses as a virtual system of higher education within the University of Chile. Differences among them have been noted insofar as they illuminate the group.

Administrators, instructors, service and program coordinators, graduates, and students of the University Centers contributed a great deal by interviews to this study. In the communities, prominent residents, and parents of students in the Centers and in the secondary schools were also interviewed. In Santiago, administrators, professors, and other staff members of the University of Chile freely responded to questions about the University Centers, and staff members of the Technical Secretariate of the University Centers were consistently helpful as advisers in planning the study, as well as resource persons. These various sources provided a basis for interpreting the present status of the University Centers.

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[3] See, for example, Plaza (1963). For a critical and constructive comment on the University in Latin America, the reader may refer to Economic Commission for Latin America (1968, pp.97-171).

The objectives of the Regional Colleges during the 1960s were to spur the democratization of higher education in Chile, to extend into the provinces, and to serve the youth who previously had little opportunity for advanced education. They were expected especially to reach young men and women from the lower-income groups. The Colleges were designed to prepare graduates for new middle-level occupations, to cater to regional needs, and to enrich the culture of the people. They were also intended to prepare students for transfer to the University in Santiago to continue professional preparation. The new type of institution was conceived as one which would subscribe to a diagnostic and student-centered program of education, including such features as general education and guidance services. What have been the accomplishments of this educational innovation; what has been its impact upon the regions; its contributions to meeting Chile's manpower requirements for economic development; what have the Centers done to serve the socioeconomic and cultural needs of their communities and regions; and how have these outlying campuses of the University of Chile influenced the University itself?

DEVELOPMENT OF EDUCATION IN CHILE[4]

In 1833 Chile's constitution specified that education was a prime obligation of the state. The University of Chile (Universidad de Chile), created by law in 1842, was charged with responsibility to coordinate the entire educational system. Under the Organic Law of 1860, which was designed to stimulate education at all levels, public elementary education was made free. The law advanced the extension of public education by providing the basis for establishing secondary schools in the cities. Throughout the 19th century, at least until 1885, the French influence upon Chilean education predominated. Thereafter, importation of German teachers had a deep effect upon the curriculum and instruction of the elementary schools and the normal schools. They broadened the curriculum by emphasizing the importance of manual work, drawing, singing, and physical education. They enriched the elementary curriculum by giving more attention to nature study and to written and oral expression of Spanish. On the other hand, their aristocratic orientation and concept of discipline created barriers among pupils, teachers, and directors.

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[4] The contents of this brief sketch, down to 1960, have been drawn mainly from Gill (1966).

Toward the end of the nineteenth century various reforms were introduced into the elementary and secondary schools. Among the important leaders in these improvements were Chilean educators José Abelardo Núnez and Don Valentín Letelier. The Pedagogical Institute (Instituto Pedagógico), founded in 1889 with six professors from Germany, influenced educational change considerably.

In 1900 Chile's educational system was centralized and uniform, but it lacked internal coordination. Elementary and technical schools were attended mainly by youngsters from low-income groups. The Ministry of Education controlled the elementary schools, and other ministries were responsible for the technical schools. These schools lacked articulation with the secondary schools and the university, whose students came from the upper-income groups. The university exercised jurisdiction over the secondary schools.

Highly significant in the history of Chilean education was the Law of 1920, which provided for compulsory elementary education for boys and girls. After the prosperity of World War I, the Chilean people were demanding greater diffusion of education and more voice in government. During the late 1920s educational turbulence accompanied the economic dislocation which resulted from the decline of Chile's exports of nitrates. Many reforms were introduced and some were repealed in succeeding governmental administrations, but the changes of this period set guidelines for future development. Various fields of education, including secondary education, were brought by law under the purview of the Ministry of Education.

Pedro Aguirre Cerda was elected President in 1938; his motto was, "To govern is to educate." During his brief administration until his death in 1941, more than one thousand elementary schools were created. Aguirre Cerda viewed education as a key to increasing productive capacity; he promoted the development of technical, industrial, and mining education. Under his administration the National Corporation for the Development of Production (Corporación de Fomento de la Producción--CORFO) was established.

Major reforms have been introduced in the elementary and the secondary schools during the past decade. The curriculum of the elementary school was revised completely and extended from six years to eight years, and the secondary school program was shortened to four years. Secondary school reform has been promoted intensively since 1932 when the first experimental school, Liceo Manuel de Salas, was established as a dependency of the University of Chile. By 1960 seven experimental secondary schools had incorporated features such as guidance services and differentiated plans of study. The illiteracy rate in Chile had dropped to 16.4 percent (Ministerio de Educación, 1964, Cuarta Parte, Cuadro XIV). This represented a major achievement which extended over a long period of years. On the other hand, the high dropout rate in the elementary and secondary schools marked a great loss in the self-realization of Chile's future adults. Between the first year of elementary school and the last year of secondary school, more than 95 percent of the pupils left school (Gill, 1966, pp.35-36). A little more than one percent of those who entered elementary school were able to graduate from the university (U. de Chile, INSORA, 1965, p.42).

When Eduardo Frei became President in 1964, a high priority was given to education in the social development of the country. Parents were assured that public schools would have places and resources for the enrollment of their children. The immediate measures included massive construction of prefabricated classrooms, training and improvement of the teachers, preparation of new plans, programs and materials, and an intensive effort to secure an increased proportionate attendance of school-age children. The coexistence of parallel systems of education was a serious problem. One of them served the children of higher social and economic levels, who attended primary schools affiliated with the secondary schools (liceos) that prepared them for the university. The other system was for the children of families of little resources, who attended public secondary schools. Those who did well could continue to the state normal schools or to the state vocational schools.

The structural changes approved in 1966 signified a major step to democratize education in Chile. The new elementary schools sought to provide all children with a common basic training and opportunity to continue to higher levels of education. After completing the extended eight-year program of elementary education, a student could now continue to secondary school for four years. The first two years of general education were now followed by two years of specialization in vocational or technical subjects, or by study in scientific and humanistic subjects. This change was designed to integrate the educational system, to provide flexibility in accord with the interests and abilities of students, to give a more meaningful education to children from all socioeconomic groups, and to meet needs of the regions in which they live. At the same time similar steps have been taken to strengthen the special programs of vocational-professional education at the secondary level, apprenticeship through school and on-the-job training, and training for adults.

Educational reforms have been accompanied by a steady increase of facilities and enrollment at the elementary and secondary levels. During 1964-1969 a total of 2,944 new schools were constructed. Total enrollment in elementary education (*educación básica*) rose from 1,532,000 in 1964 to 2,012,000 in 1969, an increase of 31.3 percent. A much larger growth took place in secondary education (*educación media*) enrollments, where an increase of 82 percent occurred during this six-year period, from 139,195 to 253,600. In 1968 approximately three-fourths of the total enrollment at each level consisted of students in the public schools, and the remaining quarter attended private schools (Ministerio de Educación, 1969c, p. 21). Efforts at the elementary and secondary levels have been devoted to developing an integrated sequence of education for contemporary life. Programs have placed considerable emphasis upon improving the preparation of teachers and increasing the retention rates of pupils. Studies of recent enrollment trends have just begun to evaluate the significance of increasing population, shifts in retention rates, modification of the educational structure, and improved educational opportunities for children from low-income families and from rural areas. Spokesmen of the Popular Unity government of President Salvador Allende have asserted that the educational system must be restructured to carry a principal responsibility in the transformation of Chilean society. The previous educational goals of increased access and relevance will be continued under the new regime, but different meanings could be attached to these terms.

THE UNIVERSITIES OF CHILE

When the University of Chile was founded, with Andrés Bello as the first Rector, it was to direct all national literary and scientific establishments and to supervise other institutions of education. In effect the university was to be responsible for the superintendency of education, which was provided for in the 1833 Constitution. Chile thus was the first Latin American country to formulate a public educational system. The law which established the university did not refer to teaching, so that without teaching personnel during its early years, the university performed only those functions which have been mentioned. The second organic statute of the university, in 1879, explicitly established the teaching and training functions of the university. The new statute also assured professors of complete freedom to teach their respective subjects (U. de Chile, Oficina de Inform., 1966, p.33). A statute in 1931 gave administrative and teaching autonomy to the university, thus facilitating the expansion of university services and programs, the reorganization of faculties, and creation of numerous professional schools and institutes independently of the state. The University of Chile long has been recognized as a liberal base of advocacy for separation of the church and the state.

Higher education in Chile is provided by eight universities, two of them public and six private. The University of Chile has more than half of the total university enrollment of regular undergraduate and graduate students (Table 1). Apart from its Centers in the provinces, the university has 13 faculties and, within them, many professional schools, institutes, and research centers. In addition to the professional four-to-seven year programs which the university offers at Santiago and Valparaíso, two-year programs in drafting and construction technology, and three-year specializations in elementary school teaching, library science, obstetrics, and administration emphasizing cooperatives or sales are offered in the capital. Studies in applied arts, dance, theatre, music, painting, and sculpture also are available.

The State Technical University (Universidad Técnica del Estado), a comparatively young institution, resulted from the 1947 fusion of various schools and programs in Santiago and other cities. Its nine campuses now are located at Santiago, La Serena, Antofagasta, Talca, Copiapó, Concepción, Valdivia, Temuco, and Punta Arenas. The Technical University prepares engineers, technicians, and vocational school teachers; specializations are available in electricity, mechanics, civil construction, mining, metallurgy, chemistry, electronics, and other fields.

The six private universities are important in Chile's educational development. Founded in 1919 in the center of an industrial region which had much potential for growth, the University of Concepción (Universidad de Concepción) is a major educational center for southern Chile. The Pontifical Catholic University of Chile (Pontificia Universidad Católica de Chile), founded at Santiago in 1888, is developing a new campus and concentrating upon educational and organizational reforms. The Catholic University of Valparaíso (Universidad Católica de Valparaíso) was established in 1928. Beginning in 1956 as an offshoot of that institution, the University of the North (Universidad del Norte) at Antofagasta received legal recognition as an independent institution in 1964. That institution now has built a branch campus at Arica, near the Peruvian border. Funded originally by a bequest from its namesake, the Federico Santa María Technical University (Universidad Técnica Federico Santa María) was inaugurated at Valparaiso in 1931. Located at Valdivia, farther south than Concepcion, the Southern University of Chile (Universidad Austral de Chile) began operations in 1955. It is dedicated especially to serving the needs of the region. All of these universities receive large subventions from the state.

The total enrollment in the eight Chilean universities (64,760 in 1968) is derived from institutions which vary greatly in size and in programs. Graduate studies have had little

TABLE 1

Enrollment in Chilean Universities, 1968[a]

Universities	Number	Percentage
State:		
University of Chile	33,137	51.2
State Technical University	9,310	14.4
Private:		
Pontifical Catholic U. of Chile	8,419	13.0
Catholic U. of Valparaíso	4,128	6.4
University of the North	1,717	2.6
Technical University Federico Santa María	619	.9
University of Concepción	5,686	8.8
Southern University	1,186	1.8
Other institutions:		
Schools of the National Health Service[b]	558	.9
Totals	64,760	100.0

Source: Universidad de Chile, Instituto de Investigaciones Estadísticas, Informativo Estadístico No. 19, 1968, p. 7. Calculations by author.

[a] Data include undergraduate and graduate students, but exclude those in extension.
[b] Schools academically dependent upon the University of Chile.

development, so that 95.7 percent of the regular students are undergraduates. Each of the Chilean universities has unique origins and features of importance for the future development of higher education in Chile. Here these facts about the Chilean universities are mentioned only to provide a background for a detailed consideration of the Regional Colleges of the University of Chile.

Problems of the University

Like universities in all parts of the world, Chilean institutions are confronted with formidable problems and are searching for suitable patterns of change. I have noted those problems of concern to persons interested in Chilean higher education.[5]

1. The University in Chile has not engaged adequately in the consideration of social needs or the demands for social change.

2. University education has concentrated upon training for the professions and therefore has neglected the personal and social development of students.

3. The autonomy of the University needs the fullest protection possible, but this precept needs to be reconciled with social responsibility, state support, and the need for coordination of higher education.

4. The University has had a structure of separate and strong professional schools and faculties, which has precluded a coordinated program of education and necessitated duplication of facilities and programs.

5. The University has had a system of decisionmaking and control which has not given participatory rights to large contingents, including students, nonacademic personnel, and many members of the professional staff.

6. A disequilibrium has existed between the qualifications of graduates and the manpower needs for economic development, especially in newer occupations that require shorter periods of preparation.

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[5] Especially useful sources for identifying these areas of general concern have been Scherz (1968); Schiefelbein (1968); Universidad de Chile (1966); and responses of 13 Chilean educators to questions on University reform (Universidad de Chile, 1969a).

7. The financing of higher education has seriously limited universities in developing new specializations, maintaining the quality of existing programs, recruiting and retraining truly full-time professors of high competence, advancing research and extension functions, acquiring modern facilities and library resources, and offering auxiliary services to students.

8. Research has been weak in virtually all fields.

9. Services to secondary school graduates and adults have not been sufficiently extensive.

10. Opportunities and financial aids have not been adequate to eliminate discrimination against students from the lower-income classes.

11. Methods of teaching have tended to be inflexible and dogmatic, with stress upon memorization rather than analytical inquiry.

12. Programs have been lacking to prepare full-time professors.

13. Technical services and activities have not been sufficient in areas such as the review of courses of study, the improvement of methods and materials of instruction, the evaluation of student achievement, the preparation of academic statistics, techniques of planning, budgeting, and the calculation of costs.

This selected list of concerns is not necessarily a reflection of any one Chilean's views, or a composite of concerns of Chileans who are engaged in higher education. I perceive these concerns as important to the immediate future of higher education in Chile. The universities have been aware of these problems for a number of years, and reform programs at various institutions, including the University of Concepción, Catholic University at Santiago, and the University of Chile, have been aimed to cope with many of these problems. Since this study of the Regional Colleges obviously does not encompass all of Chilean higher education, subsequent chapters will deal with the listed problems only so far as they fall within the scope of this inquiry.

ASPECTS OF ECONOMIC DEVELOPMENT[6]

A decade ago CORFO (1961) presented a ten-year program for national economic development. Recently the Minister of Agriculture proposed a plan for agricultural development to 1980 (Ministerio de Agricultura, 1968). That project constitutes part of the national plan of social and economic development of the republic of Chile, prepared under the coordination of the Office of National Planning, of the Presidency of the Republic (Oficina de Planificación Nacional de la Presidencia de la República--ODEPLAN).

From 1956 to 1965, agricultural production, including crops and livestock, increased at an annual average rate of 2.1 percent (Ministerio de Agricultura, 1968, p.3). In view of the rapid growth of population in Chile, approximately 2.3 percent annually (CEPAL, 1971), this increase of agricultural production actually signified an annual average decline per capita. In 1968 agriculture accounted for 10 percent of the gross domestic product, manufacturing 25 percent, and other activities, including marketing and services, 65 percent (ODEPLAN, 1969, p. 49). Chile is a developing country, in economic terms, but it is recognized as one of the culturally advanced countries of Latin America. Between 1964 and 1967 real expenditure on education rose 66 percent. During 1967-1969, the annual rates of increase of gross domestic product of Chile were respectively 2.3, 2.7, and 3.0 percent, well below the rates for the entire region of Latin America (CEPAL, 1970). The economic advance of Chile has not been impressive during this period, compared to most other Latin American countries. According to the Economic Commission for Latin America (1969b, p.155):

> In general, economic policy has pursued two main aims: the first, for the medium-term, is to slow down the rise in prices, maintain a high rate of economic growth and progressively redistribute income. The second, or long-term aim, is to make structural changes in the economy and social organization of the country, such as expanding education, increasing exports and carrying through land reform.

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[6] For reports and studies on the economic development of Chile, readers may consult Universidad de Chile Instituto de Economía (1964); CORFO (1967); and Mamalakis and Reynolds (1965). For works on political and social development in Chile, the following are especially recommended: Petras (1969); Silvert (1965); and Gil (1966).

During the administration of President Frei (1964-1970), the national government carried on substantial programs for the advancement of education, the expansion of housing, and agricultural reform. A major step also was taken to nationalize a significant part of the copper industry, Chile's economic mainstay and principal exporting industry. In addition, steel, newsprint and cellulose pulp, petroleum, textiles, tobacco, and beverages contribute substantially to the national output (Economic Commission for Latin America, 1969b). About half of all industry in Chile is located in or near Santiago and manufacturing is well protected by tariffs and import restrictions.

The leftist coalition government under President Allende pledged itself to build a socialist society and improve the welfare of the people. Within a few months of assuming power, the government moved to complete nationalization of the copper industry, accelerate agrarian reform, obtain controlling interest in private banks, and effect distribution of milk to children. A large part of the Chilean economy has been publicly owned, and the national government has been a primary source of investment. CORFO has owned or has had an investment stake in companies which have contributed about 40 percent of the gross national product (de Onis, 1970).

The population of Chile was estimated at 9.78 million in 1970 (CEPAL, 1971). Approximately a quarter of this total lived in the Santiago metropolitan area. Several years earlier, according to the 1960 census, 68.2 percent of the population were in urban communities (Union Panamericana, 1968, p.42). This relatively high growth of urbanization brought an intensification of housing, employment, and transportation problems.[7]

GEOGRAPHIC REGIONS AND THE REGIONAL COLLEGES

Chile may be divided roughly into the Great North (Norte Grande) and Little North (Norte Chico), the Central Valley and surrounding areas, and the Region of the Lakes and the southern zone. The northern zone, largely desert interspersed by a few river valleys, is rich in copper, iron, sodium nitrate, sulphur, and salt. The Central Valley nucleus, about 500 miles long, produces much of Chile's grains, fruits, wines, vegetables, and livestock. The major industrial centers of Santiago, Valparaíso, and Concepción are in this zone. The Region of the Lakes, noted for its mountains, forests, and grazing land is a tourist attraction. Southward, toward the Strait of Magellan and Cape Horn, the archipelagoes are rugged and undeveloped, or dedicated mainly to sheep raising. Oil resources are being utilized in a portion of this area. Throughout most of these regions the developmental activities of CORFO, ODEPLAN, and agencies of the Minister of Agriculture are evident. In order to promote the socioeconomic development of all parts of the country, ODEPLAN has grouped the 25 provinces into 12 regions. The intention is to identify regions adaptable to planning and to self-sustained development. Basically, the policy has pointed toward an ordered growth of urban areas, the development of small- and middle-scale industry, the installation of processing industries related to regional production of raw materials, and the creation of incentives to assist in developing natural resources. The classification of regions distinguishes between the special requirements of the relatively undeveloped areas of the northern desert and the southern archipelago on the one hand, and, on the other, the central and peripherally developed zones of Santiago, Valparaíso, the Central Valley, and the Region of the Lakes (CEPAL, 1969).

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[7] For studies and comments on social factors as they relate to economic development, see Baster and Subramian (1966); Adelman and Morris (1967); Schiavo-Campo and Singer (1970, chapter 4).

The location of individual Regional Colleges clearly suggests a concern for regional development outside the major centers of population and industrial growth. These Colleges are located at Arica, Iquique, Antofagasta, La Serena, Talca, Chillán, Temuco, and Osorno (Table A, Appendix, presents selected data about the regions). It was originally intended that a Regional University College would be created in the Santiago zone. The idea was discarded partly because of the dearth of teachers, but probably more compelling reasons for the negative decision were the existence of the central campus of the university in Santiago, and the lack of local support for a new institution (See Chapter 11). Similarly, it appears as if the existence of the University of Chile programs at Valparaíso and also Concepción and Valdivia tended to eliminate those cities as sites for Regional Colleges. Prior to the establishment of the first Regional College in 1960, the university and its various faculties had inaugurated permanent programs in teacher education, economics, mathematics, and natural sciences at Valparaíso. The university had also created the University Center of the Northern Zone at Antofagasta for instruction, research, and extension activities. In the mid-sixties the following faculties had established schools at Valparaíso: Legal and Social Sciences, Philosophy and Education, Economic Sciences, Architecture and Urban

Development, Medicine, and Dentistry (Universidad de Chile, 1966, p.49). A Department of Sciences also had been created. These substantial developments at Valparaíso evidently precluded its being proposed as a site for a Regional College.

Considering regional resources and potentialities, as well as probable results of further investment, ODEPLAN has identified and classified the 12 regions of Chile according to their prospects of achieving future economic growth. A zone of high dynamism will be expected to have a growth rate above that of the present; medium dynamism signifies the probable continuation of the existing growth rate; and a region of low dynamism should experience the same or a lower rate of growth, but will be expected to have declining economic importance in comparison with other regions (ODEPLAN, 1968b, pp.53-56).

Southward of Santiago, within a distance of 600 miles and containing approximately 38 percent of Chile's population, Regional Colleges are functioning in four inland cities: Temuco, Talca, Chillán, and Osorno. Using the above classifications, ODEPLAN places the region which includes Chillán in a category of high dynamism for future industrial and agricultural development, compared to other parts of the country. The area around Talca has been classified as one of medium dynamism, and the zones including Temuco and Osorno as areas of low dynamism.

North of Santiago and extending along a strip of nearly 1,400 miles, the four other Regional Colleges are located in the coastal cities of La Serena, Antofagasta, Iquique, and Arica. The last two cities are in the northernmost province of Tarapacá, which ODEPLAN puts in the classification of low dynamism. Nevertheless, substantial hopes are maintained for the industrial development of Arica and for the expansion of fishing and mineral development in the vicinity of Iquique. Several visits to Arica have made me optimistic about its future, provided national policy regarding the area does not change substantially. Toward the center of the desert region, the province of Antofagasta is expected to have considerable industrial growth as a result of expansion of mineral exploration and extraction. Therefore this zone is considered to be one of high dynamism. The province of Coquimbo, including the city of La Serena, is classified as one of medium dynamism because of expected growth of agriculture and further development of mineral resources. The service areas of these four Centers have about 12 percent of the population of Chile.

Chile shares aspirations and problems which are common to many countries of Latin America. She is stretching toward socioeconomic development and the realization of a better life for all of her people; she wants to control her resources and her destiny; she is experiencing social ferment, population pressures in the cities, and rising concerns of the marginal income groups which constitute the large majority of the population. Notwithstanding the differences among political and socioeconomic groups, it is evident that in Chile there is a persisting demand for education and a stalwart attempt to provide it. The Regional Colleges are participating in the efforts of Chileans to attain chosen social, economic, and educational goals. With this background, I turn now to the origins, transitions, and functions of this new type of Chilean institution which was introduced in 1960.

CHAPTER 2

ORIGINS, FUNCTIONS, AND TRANSITIONS

Large national universities, located in the populous capitals and functioning symbolically through powerful professional faculties, have been most typical of Latin American higher education during the past century. During recent decades, departmental or provincial universities have been founded in a number of countries in order to meet regional demands for higher education. Occasionally, institutions such as the Institute of Technology and Higher Education at Monterrey, Mexico, have been technologically oriented. Some have concentrated exclusively upon the preparation of teachers (the National Pedagogical University in Bogotá, Colombia). Argentina, Brazil, Peru, and other countries have established new universities or attempted to modernize old ones. Only Chile has chosen to institute a chain of regional institutions designed to be unique in Latin American higher education.

The Chilean Regional University Colleges were brilliantly and daringly conceived. Rapid strokes of educational leadership resulted in the establishment of eight Regional Colleges within a period of seven years, from 1960 to 1966. The leaders in this major departure from traditional higher education were Juan Gómez Millas, rector of the University of Chile, and Irma Sálas, professor, researcher, and educator. Rector Gómez Millas had major responsibility in obtaining support for the idea of Regional Colleges by the Superior Council (Consejo Superior) of the University of Chile. He also was principally responsible for securing community and regional collaboration that was deemed essential to the founding of the Colleges. Doctor Sálas was the advocate and principal planner of the Regional Colleges and, subsequently, for many years she was their executive director.

ORIGINS OF THE REGIONAL COLLEGES

A Proposal for a New University Structure

In 1957, three years prior to the opening of the first Regional College, Professors Irma Sálas and Egidio Orellana Bravo, of the Faculty of Philosophy and Education, presented a proposal for the reformation of studies and structure in the University of Chile (Sálas, I. and Orellana, 1957). The authors observed that the University of Chile, in spite of the liberal provisions of its Organic Statute of 1931, had concentrated upon the formation of professionals in traditional fields such as medicine and law. Further, the authors asserted, the structure of professional schools within Facultades[1] had resulted in a rigid emphasis upon utilitarian professional preparation. Therefore, the university had neglected supporting studies of letters, arts, and sciences. Sálas and Orellana proposed that university programs of study include general or basic studies for all students. But in the opinion of the two critics, the organizational structure of professionally oriented faculties and schools precluded the fulfillment of any ideas or functions apart from professional preparation in recognized fields.

Sálas and Orellana pointed out several difficulties arising from the existing organization of the university. Laboratories, libraries, and courses in basic disciplines existed separately in various schools of the university, signifying wasteful and ineffective use of funds. Furthermore, inflexible academic structure required a student to commit himself prematurely to study in a certain field without having adequate opportunity to explore his suitability for the profession. Nor did the situation permit a student to rectify his choices without undue extension of studies and extraordinary costs for him and his family. The two critics of the university also deplored the organizational structure that made an adequate response to the changing social and economic requirements of the Chilean people impossible.

Sálas and Orellana also declared that certain structural problems derived largely from the new pressures and changes in Chilean life. The persisting growth in secondary school enrollment, they said, would continue and accelerate. More and more parents were demanding that their children have access to the secondary schools, previously limited to the few. New graduates from the secondary schools were not only more numerous, they were more varied in their capacities, aptitudes, and interests than were their predecessors, who came predominantly from the elite of Chilean society. If the necessities and aspirations of the growing number of secondary school graduates were not satisfied by the university, the result would be a waste of the country's major riches--its people. Sálas and Orellana noted that the social and economic development of the country had brought increasing diversification and specialization within the traditional professions, as well as the rise of new occupations. It was assumed that continuing advances in sciences and technology would cause modifications in old and new professions, which, in turn, would require practitioners to update their training and the university to adapt its teaching to the developing professions.

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[1] A Facultad in a Chilean university is an organism that encompasses school, departments, and institutes in related fields; for example, the Facultad de Ciencias Físicas y Matemáticas (Faculty of Physical and Mathematical Sciences).

Finally, the two professors, apparently foreseeing the university reform movement of the late 1960s, advocated certain principles which should guide the reorganization of the university. (1.) The structure of the university should assure continuity of the educative process and the correlation of studies and programs in the university with those of the secondary schools. This implied that the university would not be justified in setting admission requirements above those that could be met by secondary school graduates. It signified also that all secondary school graduates would be eligible for admission to the university. (2.) The structure of the university should respect the democratic ideal that all youths have the right to obtain an education so far as their capacities permit, and in accord with their individual interests and aptitudes. This principle, the two professors noted, conflicted with the prevalent belief in Chile that the university's mission was to form the intellectual elite of the nation. Sálas and Orellana held that this would not result in a plethora of professionals. Recent studies of Chile's manpower needs indicate that many professions, as presently identified, will be saturated in the near future (Schiefelbein, 1969). However, given a university which offers diverse and flexible carreras,[2] Sálas and Orellana held that a large proportion of students would qualify for studies other than those in the traditional professions. (3.) The organization of the university should assure such flexibility of instruction that each student would be able to find the carrera best adapted to his conditions and interests. This not only would result in a rich variety of offerings, but also would assure the feasibility of a student's changing his specialization during the early stage of his studies without incurring abnormal difficulties. (4.) A new university organization should permit the fulfillment of the functions of general education, professional education, and research with a minimum of friction among the various segments of the institution. (5.) A restructuring of the university should signify more effective utilization of available resources. It need not result in the reduction of services, laboratories, institutes, and university schools, for the needs of Chile require an expansion of higher education.

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[2] The word carrera is used in Chile and also throughout this study to refer to an approved course of study which leads to a university degree in the specialization or occupational field. A carrera in this study may also be designated as a specialization, or plan of study, or program.

The proposal by Sálas and Orellana emphasized that the existing organization of the University of Chile impeded its responding effectively to the problems and trends in Chilean society. The authors stressed the importance of introducing diversity and flexibility in the programs, including preparation for new occupations, so that opportunities for advanced education might be available to graduates of the secondary schools. These ideas were a fertile base for the later development of the Regional Colleges.

The two professors recognized that structural changes would be difficult to achieve. As a transitional step, they proposed establishing higher education centers, geographically decentralized to coordinate with the University of Chile and to serve students and communities in the provinces. More students, especially from low-income families, would have the opportunity to obtain further education, to achieve a degree through preparation for an intermediate-level career, or to complete basic studies prerequisite to transferring to the university. To serve a larger number of secondary school graduates, Sálas and Orellana suggested that the only admission's requirement for the new centers should be the secondary school graduation certificate. This implied removal of the university admission requirement of a bachelor of humanities degree (bachiller en humanidades), which was granted only to secondary school graduates who performed satisfactorily on various tests administered by the university. The two professors also recommended the organization of a guidance service which would assist students in selecting appropriate fields of study. They further proposed that the higher education centers offer permanent university extension programs which would contribute to the cultural development of the provinces.

Articulation of the Secondary School and the University

About three months prior to the Sálas and Orellana proposal, in July 1957, a Santiago conference of university professors considered the lack of articulation between the secondary schools and the institutions of higher education. The educational programs at the two levels lacked continuity; concern was especially expressed about the teaching of mathematics, physics, biology, and chemistry, since there was a widespread belief among conference participants that the scientific preparation of secondary school graduates was seriously inferior to the minimum requirements that the university judged essential for beginning such studies. Since objective information was lacking, the conference group recommended a study to obtain facts, to analyze reasons for existing conditions, and to recommend programs to correct deficiencies.

Doctor Sálas, then associate director of the Institute of Pedagogical Research, was asked by Rector Gómez Millas to conduct such a study in accord with the conference recommendation. She prepared a research design and obtained data from samplings of secondary school students and teachers, and also from first-year students and mathematics and science professors at the university level (Sálas, I. and Orellana, 1960). Results of the study included conclusions and recommendations for programs of study, textbooks, achievement of students, their study habits, reading comprehension, competence in foreign languages, and vocational interests; also the academic background of teachers and professors, and methods of teaching and supervision (Sálas, I. and Orellana, 1960, pp.115-134). Research indicated that achievement levels of secondary students were unsatisfactory for studying sciences in the university. A high percentage of the students could not comprehend their science and mathematics textbooks. A considerable number of secondary school teachers of mathematics and sciences did not have either a university degree or comparable professional background; furthermore, a declining proportion of them were obtaining university degrees.

Since a basic finding was that university courses were not adequately coordinated with those in secondary schools, a radical revision of curriculum was recommended. Necessary educational and vocational guidance in the secondary schools was either lacking or inadequate. Methods of instruction came in for a full share of criticism in the study. In the general secondary school (liceo), the preparatory path to the university, teaching methods were largely expository. Only rarely, if ever, were methods such as problem-solving, field visits, demonstrations, and laboratory work used. Visual aids were virtually absent from the classrooms. Since supervision of teaching was nearly nonexistent in the liceos, anarchy in the development of course content, backward methodology, lack of professional stimulation, and general stagnation of secondary teaching had resulted. With respect to teaching in the university, the investigators noted that there was no university policy for the preparation or inservice development (perfeccionamiento) of professors, and the proportion of full-time professors was very low, relative to the total teaching staff. Students participated very little in the teaching-learning process, owing to the excess of students and the scarcity of professors. Discipline and respect that stimulate serious intellectual pursuits were lacking in the university atmosphere, and the professors maintained little control over the students' progress and achievements.

The Sálas and Orellana study gave impetus to the program of educational reform of the secondary schools in Chile. In view of the project's goals, organizational reform of the university was not mentioned among the recommendations; however, the backing of Rector Gómez Millas and Sálas' role as researcher in the study indicate the probability that the results contributed to the ideas from which the Regional Colleges emerged. In the 1964 Master Plan for the Regional Colleges, the Sálas and Orellana study was cited as showing the suitability of providing intermediate-level programs to strengthen the general education which the secondary school provided. It was held that the lack of continuity and correlation between secondary education and the university was impairing the effectiveness of further education and demonstrated the necessity for creating a new type of institution of higher education (U. de Chile, DEG, 1964, p.4).

Proposals of a New Kind of Institution for Chile

Even though the University of Chile was not yet ready to respond to demands for fundamental structural reform, some professors and educators continued to search for feasible modifications. Professor Sálas observed that the community college in the United States offered preparation for many careers and also provided two years of equivalent university study. According to Leland Medsker (1960), "The two-year college is the result of the social and economic forces which created it and shaped its character." Among these forces was the growing belief that educational opportunity beyond the secondary school must be equalized. "Any society," he writes, "which puts a premium on higher education for all who can profit from it and which recognizes the college as an aid in developing talent of many kinds and degrees must make sure that economic and social barriers do not result in the development of an educational elite." (Medsker, p.17). The community college offers a wide range of cultural and vocational programs, enables graduates to transfer to universities, and gives unemployable secondary school graduates an opportunity to prepare for an intermediate-level career.

Rector Gómez Millas became familiar with the functions of the community college when he visited California in 1958. He concluded that a similar institution, adapted to the Chilean setting. would substantially serve in meeting Chile's educational needs (Juan Gómez Millas, interview, February, 1970).

On October 14, 1959, Gómez Millas presented to the Superior Council (Consejo Superior) of the University of Chile a proposal to establish Regional University Centers. This idea arose as a result of two forces. In Santiago the concentration of facilities for higher education had brought persistent pressure from a number of provinces and cities for the founding of local universities. In fact, during the 1950s Catholic institutions took steps to extend programs of higher education to various parts of the country. It is not improbable that these moves to some extent motivated the University of Chile to set up new centers of instruction in the provinces. At any rate, Rector Gómez Millas regarded his proposal as a response to requests from various regions. Second, Gómez Millas' proposal was an educational plan which had developed from an earlier idea. Previously the rector had advocated a new type of institution in the provinces which would have offered only a general studies program as the basis for students to transfer to the university in Santiago. According to this scheme, the Regional University Centers would not provide complete carreras leading to a degree. Gómez Millas believed that the faculties of the university might be persuaded to adopt a common two-year program of general studies which would be the foundation for advanced study throughout the university (Juan Gómez Millas, interview, Feb. 1970). Approval by the faculties was essential, for they had primary authority and responsibility for the courses of study which were offered. If the faculties failed to support the general studies proposal, transfer from the suggested centers clearly would not be possible. Therefore, the rector expanded his conception of the new type of institution in his presentation to the council. He proposed founding institutions to prepare students for careers in new developing professions, which would meet the occupational needs of different regions and initiate the readjustment of the university to the demands of a changing society. The new institutions would offer training and education for intermediate-level careers, programs presumably helping to fill a labor force gap between professionals and workers with varying degrees of skill. At these new centers, studies in general education and the basic sciences, as well as programs which might be continued in the university's professional schools, would be available. Special attention would be given to the aptitudes, knowledge, and skills of students. Additional features of the new institutions would be scholarship programs, an academic advising and tutorial system, and a highly selected full-time teaching staff. Thus, proposed centers would have an intermediate function between secondary education and higher education (U. de Chile, DEG, 1964, pp.4-5), which evidently was a commitment that the institutions were not to be viewed as universities. They would extend new opportunities for education to students in middle- and low-income families, and they would provide guidance and orientation for students, offer intermediate-level career programs, and facilitate transfer to the university.

The university council approved, in general, the fundamental ideas of the document and announced that the ideas were to constitute the principal characteristics of the Regional University Colleges. It was agreed that they would be under the direction and control of a special department of the university. In accord with aspirations of the rector, this unit would be called the General Studies Department (Departamento Estudios Generales).

Professor Eugenio González Rojas, Dean of the Faculty of Philosophy and Education, submitted to the university's Superior Council supplementary ideas which strengthened further the basis for founding the Regional University Colleges. The basic points in that document, which the council approved March 11, 1960, are contained in the following paragraphs. "With the establishment of the University Colleges, the University of Chile intends to initiate changes in its organization and its system of studies in order to meet the increasing social and cultural needs of the country in a manner both dynamic and flexible" (Universidad de Chile, 1960, p.1).[3] The university had concentrated upon preparing professionals and research workers, and extension work at the university level had tended to be occasional rather than systematic. General education stopped at graduation from the secondary schools. "This deficiency has particularly serious effects on the cultural development of the country. General education, of basic importance in every educational system, becomes even more important in the case of university education, whose task it is to prepare the young for activities in fields of responsibility" (U. de Chile, 1960, p.1). It was suggested that general education and specialized training be combined within a modern concept of university work. Acknowledging that traditionally the university provided professional education, the document noted that the expanding and varied needs of Chilean society called for specialized personnel who could be trained in shorter periods than those formerly necessary.

It was prophesied in the council-approved statement that the expansion in secondary school enrollment would continue as a result of increasing population, economic development, and social and political evolution. The university, therefore, had a responsibility to offer new opportunities in higher education and specialized training. The document specified that the university be dispersed geographically beyond the environs of Santiago and Valparaíso. "This [situation] also requires an adequate decentralization of university activities based on a study of the needs, resources, and economic outlook of the different regions of the country. Centralization in the university is inconsistent with the policy of integration that seeks to improve the economic and cultural development of the country" (U. de Chile, 1960, p.2). It was not deemed necessary to establish small universities, following the pattern of the University of Chile in Santiago and Valparaíso, in order to extend higher education to the provinces.

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[3] This translation from Spanish into English, and subsequent translations of quotations in this work, were made by the author.

The proposed functions of the colegios universitarios regionales would be: To continue and improve the general education given in elementary and secondary schools; to give basic training for professional and academic studies in the university; to provide opportunities for specialization in careers adapted to regional needs, which require short periods of training; to stimulate scientific and technological research; and to carry on systematic extension activities and to give technical assistance to regional institutions.

Reminiscent of Gómez Millas' advocacy of a universitywide program of general studies, it was suggested in the council-approved document that basic studies in the professional schools should coincide to a considerable extent, so that such studies could be offered in the Regional Colleges. In spite of prevailing indifference and opposition among the faculties, the proposal held open the possibility of eventually pursuing advanced studies in the university. Consequently, students could avoid the danger of premature selection of a career through vocational and educational guidance.

Elaborating upon the proposed curriculum of the Regional Colleges, González in his presentation recommended that general and special education be pursued simultaneously. For two years students would study arts and letters, social sciences, biological sciences, physics, and mathematics, and with the aid of diagnostic testing and guidance, they also would concentrate in one of these areas. Thus, each area of study would include courses for specialization and for general studies. Students would then be provided with a stronger base of general education prior to embarking upon advanced and specialized studies, or seeking employment and assuming other adult responsibilities after completing two years of study.

In retrospect, it might have been propitious to indicate in that early proposal a few developing occupations which might be termed "intermediate-level careers." Doing this, however, would have required a study of the occupational needs in regions where colleges might be located and such studies could not have been carried out until the university had created a department for directing the new Centers. Inasmuch as any new course of study legally had to originate with the appropriate faculty in Santiago, trouble might have occurred over suggestions of carreras that had not been formally established.

A broad plan of extension education was also suggested in collaboration with the cultural extension department of the University of Chile. Included in the plan were lectures, exhibits, short courses, and publications. Instructors in the Regional Colleges would offer information and technical assistance to the community in coping with local problems. Staff members could also offer refresher courses and in-service training to teachers in the region.

The university council's approval of Dean González' document prepared the way for the creation of the first Regional College.

The First Regional College

Upon considering a petition of prominent residents from the Cautín province in southern Chile, the University of Chile created a colegio universitario regional at Temuco, the capital of that province. Officially this was done July 13, 1960, by Decree No.7,348 of the Ministry of Education, upon the recommendation of the University of Chile. The new Regional College was established as a dependency of the Faculty of Philosophy and Education.

In the absence of the faculties' endorsement of general studies, the establishment of a colegio regional depended upon approval of at least one carrera which would be offered. In order to expedite the process, Rector Gómez Millas requested Professor Irma Sálas, then Chairman of the Department of Education, to propose to Dean González, and so to the Faculty of Philosophy and Education, the new carrera of primary teaching. The resulting project was designed to mitigate the shortage of elementary teachers which had arisen with the rapidly expanding enrollment in the elementary schools. Preparation of an elementary teacher normally required twelve years of study: six for completion of the elementary school (prior to the reform and the extension of elementary school to eight years) and six in the normal schools. The proposed carrera required six years of elementary school, six years of secondary school (prior to the reform and reduction of secondary school studies to four years), and two years of study, including general and professional education, in a Regional College. The course of study included specialization in a subject field, such as Spanish or Mathematics. The degree of profesor primario (primary teacher) would entitle the recipient to teach in the first few years of the elementary schools.

The proposed carrera received the approval of the Faculty of Philosophy and Education and the university's Superior Council, and the rector authorized it by decree in the latter part of 1961 (U. of Chile Decree No. 10, 914, Dec. 1961). In fact, the carrera had been introduced experimentally at Temuco the preceding year (U. de Chile, Inst. de Educ., 1960, p.79), but the decree legalized the granting of a título (professional degree) to those completing the new carrera. Although this modified program for primary teaching was a strategic means for launching the new kind of institution, its introduction also signified some curricular flexibility in the university and support for the novel venture in Chilean higher education.

Within the next six years a total of eight Regional University Colleges were functioning in the provinces outside of Santiago--four in the north and four in the south. (See chapter 9 for a summary of community participation in establishing Regional Colleges.) This chain of institutions marked the university's attempt to fulfill a growing social responsibility without forcing a fundamental change in its structure. In 1961, with the approval of the Superior Council, Rector Gómez Millas created the Department of General Studies (Departamento Estudios Generales--DEG) and made it responsible for directing the colegios universitarios regionales (Decree No. 10,544, 1961). Carreras of the new colleges could be introduced only with the approval of the respective faculties and the Superior Council of the university. Budgetary allocations came from the council. The rector appointed Doctor Sálas director of the General Studies Department, and she reported directly to him. It appears as if Gómez Millas hoped this new institution would nurture the development of general studies and exercise a salutary influence in the adoption of such a program in the University of Chile at Santiago and Valparaíso. In 1962, one year after the founding at La Serena of the second Regional College (Ministry of Education Decree No. 16,217, 1960), the two colleges offered students who completed a year of general studies the opportunity to select from nine different carreras (U. de Chile, DEG, 1962b). The duration of studies in these specializations was two or three years.

TRANSITIONS AND IMMEDIATE EFFECT OF UNIVERSITY REFORM

Need and Demand for Higher Education

As propounded in 1957 by Sálas and Orellana, the University of Chile had responded at least in part to the educational, social, and economic pressures of the time. The extraordinary expansion of secondary education had resulted in an increasing number of university applicants. From 1940 to 1960, enrollment in the secondary schools increased 292 percent. In 1940, 46,942 students attended the general secondary schools, while in 1960 enrollment reached a total of 184,029 (U. de Chile, DEG, 1962b).[4] In a rigidly selective system of education, such an increase was impressive. Data for much of the twenty-year period indicate that female enrollment rose considerably more rapidly than male: from 1940 to 1956, female enrollment increased 195.3 percent, while male enrollment increased 127.2 percent (Grassau and Orellana, 1959, p.20). This remarkable growth of enrollment came in spite of the fact that only 20 percent of the pupils who began elementary school completed its course of studies. Graduates of the secondary schools comprised 2.8 percent of those who matriculated in the elementary schools (U. de Chile, DEG, 1962b, p.1). Of the total who entered elementary school, only 1.5 percent eventually were admitted to the university. In 1960, 30 percent of the secondary school graduates enrolled in the university; the remaining 70 percent, more than 8,000 youths, were forced to orient themselves to adulthood without either guidance or preparation for employment.

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[4] Variations in enrollment data and reporting would affect the above percentage increase in secondary school enrollments, but other sources indicate that the increase in any case exceeded 240 percent. For comparison, however, see Grassau and Orellana (1959, p.18).

Opportunities for higher education in 1960 were scarce outside Santiago and Valparaíso. If a student came from the provinces to attend the university in the capital, his family would often accompany him. Such adjustment frequently created serious social and economic problems, including uncertainty of employment and income. Family migration also intensified the concentration of population in Santiago, then already a city of nearly 2 million.

Leaders in the provinces were aware of this situation and deplored the absence of higher education opportunities, the resulting deterrent to cultural improvement and economic growth, and the loss of families whose sons and daughters were potentially productive contributors to economic and social development in the provinces. Not surprisingly, many political and civic leaders persistently sought the establishment of institutions of higher education in the provinces (Sálas, I., 1962). To the youths themselves, restricted educational opportunities were ominous, for higher education remained the principal key to social mobility in Chile.

A Statement of Functions

Shortly after the founding of the second College at La Serena, the University of Chile prepared a summary of the background and characteristics of the Regional Colleges.

> The basic concept underlying the entire plan is the fundamental right of all citizens to develop their potentialities to the fullest extent possible through the medium of education.
>
> In essence, the program of the Regional Colleges has four facets: (1) to provide a general two-year course of higher level studies for secondary school

> graduates in the provinces and, eventually, in the capital; (2) to prepare selected students for enrollment in the second or third year of a professional Faculty at the University of Chile; (3) to offer terminal education for a variety of middle-grade careers to those students who lack either the interest or the aptitude to transfer to an advanced professional program; and (4) to serve as a cultural and educational center for the provincial community as a whole (Universidad de Chile, 1961a, p.19).

The Master Plan (U. de Chile, DEG, 1964, pp.7-8) for the University of Chile's University Colleges, 1965-1970, further delineated these functions, commented on below by the author:

(1) "*To provide opportunities for intermediate-level studies in accordance with national and regional needs.*"

Growing interest in economic development and manpower studies may have facilitated mention of training for national and regional needs. The 1961 reference to "terminal education" noted that such studies were for students who lacked either the interest or the aptitude to transfer later to a traditional professional program.

(2) "*To provide opportunities for transfer to professional University schools.*"

Use here of the term "university schools" refers only to the University of Chile. The Regional College carreras which presumably could lead to a transfer were parallel to the first and second years of study in the university's professional schools. The possibility of transferring to the university in Santiago was clearly implied in the 1961 statement, but transfers actually could be effected only to those schools which formally agreed to participate in such an arrangement. Faculties of the University of Chile, with the exception of the Faculty of Philosophy and Education,[5] had demonstrated reluctance to collaborate with the Regional Colleges by accepting transfer students, in advanced status, after they had completed general education and other required studies in a short-term carrera (Sálas, I., interviews, April 8-9, 1970, Santiago).

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[5] The Faculty of Philosophy and Education agreed Dec. 18, 1962, that (1) a permanent relationship should exist between the faculty and the Regional Colleges; (2) the principal features of the Regional Colleges were the carreras cortas (short-term programs of study); and (3) qualified students from the Regional Colleges could transfer to the schools of the faculty, provided that their previous studies were exactly in

(3) *"To give the students basic training in the sciences for the intermediate-level university courses."*

(4) *"To provide general education courses in order to promote the development of the student as a whole."*

Rector Gomez Millas' (1963, pp.4-12) opening address at the inauguration of the 1963 academic year again espoused the introduction of a university program of general studies for all students. The statement brings to mind earlier dissatisfaction with the university's failure to provide general education for entering students.

(5) *"To provide guidance to the students in their educational and vocational pursuits in order to adapt them better to personal and to school situations and to promote their school achievement and future professional efficiency."*

Beginning in 1957 with the Sálas and Orellana document on university reform, concern for the individual student had been expressed. The 1961 statement (U. de Chile, 1961a, p.22) stressed the importance of a closer relationship between professors and students, fostered by full-time staff appointments and by the institution of the tutorial method of instruction, and maintenance of vocational guidance facilities.

(6) *"To provide opportunities of formal education for adults; and to carry out activities for the improvement of professionals; to promote and organize cultural activities to meet the interests and needs of the different groups of the community."*

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accord with the program and courses of the respective schools. From a typewritten statement signed by Julio Heisse González, Secretary of the Faculty of Philosophy and Education, University of Chile, dated December 27, 1962.

(7) "*To collaborate with the respective agencies in the study and utilization of regional natural resources.*"

This resembles a portion of the proposal which the University Council approved in 1960: that one responsibility of the new colleges was to stimulate scientific and technological research.

Except for additional detail, the functions specified in the council-approved statement of 1960 were fundamentally the same as those listed in the 1964 Master Plan. Chapters 4, 7, and 9 will treat these topics in further detail.

Recognition of the Regional Colleges

The move toward founding Regional University Colleges in Chile was soon recognized as a bold venture in higher education. Favorable comment was received from international agencies for educational and economic development, partly in response to a search for funds by the University of Chile. In November 1962, the Inter-American Development Bank (Banco Interamericano de Desarrollo--BID) approved a substantial loan to the University of Chile to construct and equip five colegios regionales in the provinces.[6] In a preliminary analysis of the project, BID asserted that,

> Chile in recent years has taken the leadership in breaking with the past, and in doing so has shown the way in Latin America. . . . Perhaps the most significant development of all . . . is the pioneering work within the past two years of the University of Chile in initiating the Regional University Colleges, an innovation in advanced education in Latin America. (Inter-American Development Bank, 1962a).

The university had also received a $660,000 grant from the Ford Foundation to develop various aspects of the Regional Colleges.[7] Preliminary Foundation reports suggested that the Regional Colleges were one of the most promising developments in Chilean higher education. Delegates to the UNESCO Conference on Education and Economic and Social Development at Santiago in 1962 heard a description of the Chilean Regional Colleges and adopted the following recommendation:

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[6] For details of financing, see Construction for the Regional Centers, infra Chapter 9.

[7] For information about the program of fellowships for instructors see Chapter 5. Additional references are also found in chapter 9.

> That new higher education institutions be initiated, such as the Regional University Colleges, so as to extend the advantages of higher education to the provinces and to utilize more fully the ever-growing human resources that graduate from the high schools, and to satisfy the need for intermediate-level technicians demanded by economic development, without increasing the number of universities (U. de Chile, DEG, 1964, p.10).

The Creation of More Regional Colleges

Rector Gómez Millas and Dr. Irma Sálas vigorously collaborated to establish Regional Colleges. The Superior Council of the University of Chile approved creation of three additional colegios universitarios regionales in October and November 1962, at Antofagasta in the north and Talca and Osorno south of Santiago. In accord with this action, the Ministry of Education authorized (Decree No. 18, 464, 1962) the establishment of the three Centers and placed them under the direction of the Department of General Studies. The College at Antofagasta began functioning in 1963, Talca and Osorno in 1965.

In view of the resistance to change that is characteristic of a university environment, swift action was probably necessary if the Regional Colleges were to survive as permanent extensions of the educational scene. By founding three Colleges within 3 years, Rector Gómez Millas virtually assured the establishment of this new Chilean institution. Something was sacrificed along the way, however; a slower pace might have facilitated the transfer of more Regional College students from the provinces to Santiago and given more chance for the adoption of a two-year general studies program throughout the university. Rapidity of action precluded lengthy and intensive involvement of the university community in the issues and opportunities which the Regional Colleges presented.

In 1963 Eugenio González, who had participated extensively in the previous development of the Regional Colleges, was elected Rector of the University of Chile. Gómez Millas was subsequently appointed Minister of Education for the national government.

By 1964 the development of the Regional Colleges at Temuco, La Serena, and Antofagasta had progressed more rapidly than had been foreseen when the first one was founded four years before. They had introduced many new carreras at the intermediate level, offered transfer programs for the preparation of secondary school teachers, nurses, social workers, and matronas,[8] and had introduced extension programs in their respective communities.

Providing leadership and direction, the Department of General Studies was staffed with the director and six coordinators who functioned in specialized areas. The department had a principal role in the planning and founding of new Colleges and in budget administration.

Transition to University Centers

It was at this point in the lives of the Regional Colleges that Rector González presented to the university's Superior Council a report on the colegios regionales and a proposal for change. He observed that relations between the university faculties and the Department of General Studies had become regularized. These organisms, he said, had agreed upon programs and standards in the carreras; norms had been established for the selection of teaching personnel and the supervision of studies; and the Regional Colleges had become better integrated with the university structure. González wanted a still more harmonious participation of the Colleges within the whole university. The Colleges had complied with their assigned tasks and continued their development to the point of transforming themselves into centers of the university. González considered the young institutions capable of introducing more diverse and complete professional studies, carrying forward university extension activities, and strengthening regional research that already was under way. Therefore he proposed the transformation of the colegios universitarios regionales into centros universitarios de provincia (University Centers of the provinces). In other words, the Regional Colleges appended to the university could become Regional Centers of the university itself. This shift would enable the institutions to offer a variety of higher education, especially in professional fields essential to the Centers' development. Such an extension of function, of course, would be contingent upon the availability of suitable personnel, libraries, and facilities. The label colegios universitarios regionales, according to González, suggested the idea of institutions inspired by foreign models whose objectives were also foreign to the University of Chile (del Río and Alegría, 1968, p.14).[9]

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[8] Matronas are obstetrical technicians in delivering babies, and in providing pre-natal and post-natal care which does not require the services of a physician or medical specialist. Matronas commonly provide their services independently at childbirth.

González asserted:

> Our University, in its character of a State institution, must continue its policy of expansion of higher education toward the provinces, in order to satisfy the growing demands of our political, social, economic, and cultural evolution; that is to say, of the national development understood as an organic process that embraces all aspects of the life of the country. . . . Apart from the fundamental purpose of offering to the youth of the provinces new opportunities of higher education, the University has wanted to put into practice modern methods of academic, technical and administrative organization that will permit better use of available resources. . . . (U. de Chile, DCCU, 1968d, p.5).

In accord with González' recommendation, the University Council approved the transomation of the Regional Colleges into centros universitarios on December 2, 1964. This action was implemented in the early months of 1965 by decree (U. de Chile, No. 467, Jan., 1965; Ministry of Education, No. 4859, April, 1965) which formulated the direction of the centros, including a Technical Council for considering general policies and the replacement of the Department of General Studies by a Coordinating Department of the University Centers (Departamento Coordinador de Centros Universitarios, DCCU).

So the colegios universitarios regionales, a name which signified postsecondary or quasi-university institutions, became centros universitarios of the University of Chile itself. Subject to university policies and the new administrative structure, the centros could thereafter offer a wide range of university programs extending more than three years. The carreras of two or three years in length, which had been introduced in the Regional Colleges, were classified as carreras técnicas (technical career programs).

As a result of these actions, the institutions in the provinces attained more status. Communities evidently supported the change, although few residents probably understood and approved the circumscribed and innovative functions of the original colegios universitarios regionales. Even many administrators and professors failed to understand or accept the purposes and functions of the original institutions (Salas, I., interview, April 8, 1970). Students and professors often were troubled about administrative relationships of the Colleges with other units of the university (del Río and Alegría, 1968, p.14). The pace had been swift, probably too swift, for ample enlightenment concerning the objectives, functions, programs, and status of the Regional Colleges.

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[9] For a reference to this same idea, see Scherz García (1968, pp.65-66, 99). Refer also to Chapter 7 of this study for notes and comments on a recent study of first-year students at the Regional University Centers.

Public and intra-university confusion about the functions of the colegios universitarios regionales probably was greatly reduced by the change of name. The colegios universitarios regionales had been a new creation in the Chilean educational scene, but centros universitarios ("universities," by common usage) were familiar to everyone. Inevitably, the new identity gave impetus to interest and aspirations for the introduction of four[10] and five-year programs. Many of the staff members of the centros welcomed this move, as did community leaders and parents who wanted more choices available for their children in their home communities.

Following the name change, seemingly less institutional energy was devoted to the development of intermediate-level career programs. Three basically new short-term carreras were introduced in the next four years: nursery school teaching, chemistry technology, and construction technology. Generally, specializations such as these are not traditionally associated with university studies. However, by 1966 the Centers were offering 20 carreras of two or three years in duration, considerably more than in 1964 (U. de Chile, DCCU, 1966a, p.10). Of these 20 carreras, 15 were developed only for the

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[10] When considering a time prior to 1965, the terms of identity normally are Regional Colleges, University Colleges, or Spanish equivalents such as colegios regionales or the formally proper colegios universitarios regionales. For time references of 1965 through 1969, the terms University Centers, Regional Centers, Centers, or their Spanish equivalents of centros universitarios, centros regionales, or centros usually are utilized. Occasionally "institution" or "branch" or "campus", meaning a branch or campus of the University of Chile, is also used. References to the situation in 1970 may entail use of sede, but results of the field research in 1969 are given with reference to centros universitarios or like terms as explained above.

Centers and 5 were offered in the university at Santiago as well as at the Centers. After the Colleges became University Centers, apparently less importance was attached to the resistance of the faculties in Santiago to accepting transfer students from the provinces. Even though several faculties had agreed to accept transfer students, they preferred to have the Centers offer the complete carreras. Faculties, or their spokesmen, held that they did not know the caliber of instructors in the provinces and did not have facilities to accommodate transfer students. The lack of a common basis for evaluating previous studies, such as a system of academic credits, reduced the feasibility of a workable plan for admitting transfer students (Sálas, I., interview, Feb. 8, 1970). Faculty approval of the Centers' carreras was not a sufficient condition for acceptance of the students' course work at the Centers in lieu of comparable courses at the university. Furthermore, it was more attractive to students, parents, and the Centers' staffs to have complete carreras in each locality.

It is not surprising, therefore, that obstetrics, a three-year specialization which had been a transfer program in 1964, could be completed at the centros in 1966. In the same year the Centers in the provinces offered eight carreras with a duration of more than three years. Four of these were transfer programs which included subject concentrations for the preparation of secondary school teachers (U. de Chile, DCCU, 1966a, pp.16-19). The programs selected for completion at the Centers were in social work, nursing, and secondary school teaching, with concentrations in plastic arts and music education. Two years previously the carreras of social work, nursing, and all areas of secondary school teaching had been transfer programs and, therefore, limited to two years of study at the Centers (U. de Chile, DEG, 1964, p.54).

The functions of the centros universitarios did not differ from those of the colegios regionales, except for the additional opportunity of the centros to offer carreras of longer duration. Certainly, however, the objectives of the institutions became more diffused. Less focus upon the original objectives was unavoidable. After a short life of one to four years for the existing institutions, they were expected to adapt themselves to another formidable assignment. It is not reasonable to suppose that, even aided by the efforts of the Department of General Studies, they had achieved their original curriculum objectives in a manner generally satisfactory to their staffs. Indeed, the step which the university's Superior Council took appears to have been responsive to external criticism of the Colleges and to opposition within the university itself. Perhaps the Colleges' change of status was influenced even more by Rector González' placing more stress on organizational relationships and internal consistency of functions rather than on educational innovation and experimentation. In retrospect, it is clear that the colegios regionales had too little time for the innovations and experimentation which their earlier conceptions had implied. They had progressed remarkably well, but they were still in a formative stage of development.

Emergence of Additional University Centers

In 1957, the University of Chile had established the Centro Universitario Zona Norte (University Center of the Northern Zone) in Antofagasta to develop instruction, scientific research, and extension in the three northern provinces. Under its aegis the Pedagogical Institute, the School of Social Work, the Department of Cultural Extension, and the Department of Scientific Research were introduced. After 1965 the University Center of the Northern Zone merged with the colegio regional. The Center at Antofagasta officially carries its regional title although it has functioned for several years as one of the system of eight Regional Centers.

The University Center of the Northern Zone supervised the school of administration which was founded at Arica in 1962 as an annex school of the Faculty of Economic Sciences. Similarly the Northern Zone Center sponsored educational activities at Iquique, also in the frontier province of Tarapacá. In 1965 separate centros universitarios were set up at Arica and Iquique and the school of administration was absorbed by the new Center. A year later, the eighth Regional Center was founded at Chillán in the province of Ñuble.

The Centers at the Outset of the University-wide Movement toward Reform

By 1968 total enrollment in the centros universitarios of the provinces was 8,257. Thirty-one carreras were offered (U. de Chile, DCCU, 1968d, Anexos i,ii). Professorial personnel had increased steadily through the years; in 1968 the eight Centers had 547 full-time instructors and 607 part-time instructors (U. de Chile, Oficina de Planificación, 1969b, pp.232-233).

Like their antecedents, the centros universitarios had no direct representation in the Superior Council of the university. Many students, instructors, and administrators were uncertain or perplexed about the status of the centros universitarios as part of the University of Chile. The intermediary functions of the coordinating department of the University Centers, together with the supervisory activities of the faculties themselves, gave the Centers reason to hope for local autonomy and direct participation in university government. The Centers were eager to actively participate in the imminent movement toward reform of the University of Chile.

Events of 1968 within the University of Chile deeply affected the status and conditions of the centros universitarios in the provinces. The reform crisis arose on May 24 when members of the Federation of Students of the University of Chile (Federación de Estudiantes de la Universidad de Chile--FECH) declared a university-wide strike and seized the central administration building (Casa Central) in Santiago. A few days later FECH proposed a program of reform which followed closely the one which the organization had adopted at its convention of 1966. The President of FECH declared, when the seizure began, that the rector and the university's Superior Council had discussed reform for five years and that the university could wait no longer. The precipitating cause for the crisis was an election in the Faculty of Philosophy and Education in which students, contrary to university policy, were allowed to vote. After the Superior Council held the elections to be invalid and the dean of the faculty refused to hold new elections, the situation became more critical. In the following crisis, Rector González resigned, faculty deans were ousted, and new interim university authorities were chosen. The FECH assumed a principal and constructive role in subsequent steps toward university reform. Meetings of students and of associations of instructors in the University Centers endorsed the movement toward university reform. Each centro organized its reform commission and studied the issues before the university community.

Transition to Sedes of the University of Chile

The Centers voted, by a narrow margin, to become independent sedes (branches or campuses) of the university, and so, by implication, endangered the coordinated system of Centers (CRDHE, U. of Calif., 1969, p.2). Representatives of the centros advocated that the University Centers be recognized as individual sedes having direct representation in the decisionmaking bodies of the university. As a result of decisions by reform commissions and a plenary assembly of the university in September 1968, it was agreed that the centros universitarios in the provinces would be sedes. A sede would be a major subdivision of the University of Chile, which would function as a national decentralized system under one organic statute. It was agreed further that a sede would have certain characteristics: (1) it should be concerned with the development of the respective region; (2) it should have a high degree of autonomy in government, administration, and academic affairs; (3) it should have a size functionally related to the region where it exists; and (4) it should develop to a level of academic excellence in one or more fields.

These characteristics were considered desirable goals, rather than absolute requirements for recognition as a sede (U. de Chile, Mesa Directiva . . . de Reforma, 1968, pp.41-42). In the second university referendum, July 1970, the majority affirmed these ideas and further held that, since the sedes were the major organisms of the university, they should relate directly to the central government of the university (U. de Chile, Congreso U. Transitorio, 1970, pp. xiii-xiv, xxii-xxiii, 5-11; El Mercurio, July 15, 1970).

Following the 1968 universitywide referendum, the results of which were far from conclusive on many issues, the reform movement was threatened for months by the interference of party politics,[11] which played havoc with academic principles and values (Barbosa, 1969). Upon the recommendation of Ruy Barbosa, then rector of the university after the 1968 resignation of Eugenio González, the national congress passed legislation (Law No. 17,200) providing for the composition and selection of transitory officials and administrative bodies within the University of Chile. Of fifteen specially elected representatives on the Provisional Superior Council of thirty-five members, one representative was to be elected by the personnel and students of the sedes in the provinces. Those in the provincial sedes were also to participate in the election of university-wide representatives: students were to choose six student representatives; academics were to elect six representatives; and nonacademics were to vote on two representatives (El Mercurio, Dec. 6, 1969). In the larger Provisional University Congress (Congreso Universitario Transitorio) of 112 members, the sedes in the provinces were allocated 16 academic representatives in a total of 70 in this category. Students in the provinces also were given direct representation, as well as the right to vote in the election of universitywide representatives. The election of provisional officials and representatives was completed November 12, 1969. Aside from providing a legal structure for the university as it passed through a period of turbulence, the law assured an appropriate mechanism for proposing a new organic statute and a reorganization of the university in September 1970. This task was the primary responsibility of the newly organized university congress.

In compliance with decisions reached within the university and upon the recommendation of Edgardo Boeninger, the newly elected Rector of the University of Chile, a Ministry of Education decree in April 1970 specified that the centros universitarios of the provinces were thereafter to be sedes universitarias de provincias (university campuses, or branches, of the provinces) (Education Decree No. 1186,

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[11] For an editorial criticizing the continued division of power between the university's Superior Council and the bodies which had been introduced to advance reform, see El Siglo, April 24, 1969.

April 6, 1970). Within ten years of the founding of the first colegio universitario regional at Temuco, this new Chilean institution had experienced two fundamental changes in its identity and status.

The Problematical Role of the New Sedes in the Provinces

Acceptance as sedes universitarias gave another dimension to the aspirations and activities of the former colegios regionales. University operations at Santiago and at Valparaíso were also identified as sedes. For better or worse, the less mature sedes in the provinces now had to adapt to the three acknowledged functions of the university: teaching, extension, and research. The research function was entirely new for most of the sedes in the provinces and one for which they had little preparation.

The future of the sedes in the provinces will depend considerably upon their voting power and influence within the remodeled structure of the university. Even more important will be the outcome of the internal struggle for power in the university between those who wish to commit the university to their own political ideologies, and those who want to build a university which cherishes free inquiry.[12] The resolution of this question will be a major determinant of the university's future.

As observed recently (Panorama Económico, 1969, p.4), students and professors of various political affiliations relate their beliefs and ideologies to affairs of the university. A serious problem arises in reproducing within the context of university problems and policymaking all the controversies, postures, and interests of political parties. This approach to issues gives emphasis to the power of political parties rather than to the good of the university. Those who are independent politically can do much to uphold the commitment of the university to its functions of teaching, extension and research. Whether there is any winner in this controversy over political power, the university will probably become more active in the furtherance of social change and more engaged with the problems and needs of the Chilean people.

Social action may be influenced, on the one hand, through espousal of demonstrations and the advocacy of doctrines. Or it may be furthered by scholarly examination of social forces and issues, by participation in groups seeking to set priorities and determine appropriate actions, and by continuing service to the people through effective teaching, research, and extension services relevant to social change and development. The sedes in the provinces could be a balance wheel to serve the university in traveling a course best for the majority of the Chilean people and the future of the university itself.

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[12] See, for example, the editorial, "El Proceso Reformista Universitario," El Mercurio, April 2, 1969.

A prime motivation in serious efforts for university reform has been the conception of the university as a catalyst, a participant, even a mover, toward social change. Those in the sedes of the provinces, as well as those in Santiago and Valparaíso, will have important responsibilities in determining the course of the university itself. The former colegios regionales and centros universitarios themselves might travel in one of several directions: They might wish to become more-or-less traditional universities within the University of Chile; they might wish to concentrate upon the development of specialized strengths related to the conditions of the regions; or they might choose to intensify their original roles as innovative, student-oriented institutions concentrating upon carreras in developing occupational fields. Trends in the reform movement indicate that decisions on the scope and functions of the sedes in the provinces will be formed and constituted in the evolving organic statute of the University of Chile, as finally expressed in public law, and then, in that framework, by the major councils of the university itself. In accord with reform commitments to democratization and participation, the sede communities and councils, individually and in collaboration, should ponder carefully their functions and prepare to engage in the charting of their future course.

SURVEY RESPONSES CONCERNING OBJECTIVES AND FUNCTIONS OF THE UNIVERSITY CENTERS

Public statements of the functions of the colegios regionales had been largely consistent from 1960 through 1964. They reflected concerns which Sálas and Orellana had expressed years before in their commentary on the restructuring of the university. As centros universitarios, beginning in 1965, the University Centers continued to demonstrate a commitment to general education, training in the basic sciences, development of language skills, and use of both theory and practice in carrera requirements. The Coordinating Department for the University Centers, like its predecessor the Department of General Studies, emphasized curriculum planning and development, methods of instruction, evaluation, and guidance. Generally, the Centers attempted to provide various services to the community, to assist in up-grading teachers and other groups, and to ascertain characteristics of the respective regions.

Objectives of the Centers

In the field research, described in the Appendix, an open-ended question about their conceptions of the actual and current objectives of their respective University Centers was asked of teachers, students, and administrators. Many respondents did not differentiate between objectives and functions; 44 percent of the instructors and 29 percent of the institutional administrators[13] said that an objective of the Centers was to prepare persons for professional careers (Table 2). This activity relates more to function than to objectives, although clearly such a function should be designed to meet the professional needs of the country. Objectives usually are expressed in terms of the learning, growth, and behavior of students, and the fulfillment of societal needs. Table 2 shows the comparative agreement of instructors and institutional administrators on the objectives of the Centers. Both groups concentrated upon professional preparation; only six percent of the teachers and four percent of the administrators mentioned the preparation of professionals for intermediate-level careers as a separate objective. Twenty-one percent of the administrators and 17 percent of the instructors listed teaching, research, and extension as objectives of the Centers. Since the Centers now are regarded as integral parts of the whole university, it is not surprising that this combination of activities was frequently specified. Again, in this case, many respondents were not making distinction between objectives and function.

Community relations received considerable attention from the respondents. Nearly one-fourth of the teachers named offering resources to the community through special services, extension programs, and student field work in the various carreras as an objective. But only seven percent of the administrators referred to this activity. Administrators, possibly, are more aware than teachers of the Centers' budgetary limitations and the pressing unfulfilled needs on the campus itself. Eighteen percent of them specified that an objective of the Centers was to raise the cultural level of the community. More than one-tenth of each group noted that the University Centers facilitate development of the regions. One of the original purposes of the colegios regionales was to extend additional educational opportunity to those in the provinces. Twenty-one percent of the administrators said that a purpose of the Centers was to provide study opportunities to persons of scarce resources; only 13 percent of the teachers mentioned this objective.

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[13] The term "institutional administrators" refers to those who have specialized assignments which are institutionwide in character: coordinators of studies, guidance, student welfare, extension, and chief librarians. Directors, who are the chief officers of the Centers, and heads of carreras or departments are reported under their respective identities.

A comparison of the instructors' and administrators' responses, by individual Centers, indicates a fairly consistent pattern of emphasis among them. In all Centers emphasis was given to professional preparation for careers in the regions and the country. Respondents at Arica, Temuco, and Chillán mentioned proportionately more often the objective of giving opportunities to students of low economic resources. At Antofagasta and Temuco nearly one-half of the respondents mentioned the offering of resources and

TABLE 2

Conceptions of the University Centers

Objectives	Respondents (%)	
	Instructors[a]	Institutional administrators[b]
Prepare professionals for zone and country	44	29
Offer resources by community services, extension and students' field work	24	7
Provide teaching, research, and extension	17	21
Raise cultural level of community	13	18
Give study opportunities to persons of limited resources	13	21
Permit more knowledge and development of the zone	12	14
Prepare professionals for intermediate level careers	6	4
Offer carreras appropriate to zone	6	--
Prepare and strengthen teachers	5	11
Seek more academic and administrative independence	4	4

Note: Most of the primary data obtained in this study have been derived from samplings of less than 100 respondents. Consequently, percentages usually are given in whole numbers which have been rounded from the first decimal place. This procedure does not reduce the usefulness of the results, and it may expedite reading them. Some instructors and administrators identified more than one objective so that the sum of the percentages in each column exceeds 100 percent.

[a] sample numbered 112.
[b] sample numbered 29.

services to the community as an objective. Being among the older Centers, they have had considerable opportunity to turn their attention outward to the region. In the case of Antofagasta, a special regional tax has aided the advancement of extension activities and increased awareness within the Center of its services to the community. For several years the Center at Temuco has had a department of regional studies, and at the Antofagasta Center archaeological studies have been conducted in the region. At both these Centers the reform commissions were quite active and apparently created considerable appreciation of extension functions. Respondents from other Centers gave little attention to community service.

Among the directors of the eight Centers, similarities and modest differences were evident. They generally expressed objectives which related to academic or professional studies, and also to community service or socioeconomic development of the respective zone. One director listed specialization in a particular field, such as health sciences, as an objective. Other objectives which directors presented included the following: providing programs of study for graduates of general secondary schools (liceos, or in usage, often humanidades) in the region; contributing to scientific and cultural development of the zone; producing social and economic improvement in Chile; becoming a center of arts and sciences; offering opportunities to all students of low resources; and encouraging the development of all forms of culture in the region and the community.

TABLE 3

Functions of the University Centers

	Respondents (%)		
Views of Functions	Instructors[a]	Institutional Administrators[b]	Students[c]
Offer general education	84	71	48
Offer professional preparation	97	82	85
Give instruction in basic sciences	87	75	48
Teach Spanish and other languages	86	71	43
Provide guidance services	91	82	76
Provide student welfare services	98	86	76
Furnish professional services to community	92	36	76
Explore human and natural resources	98	82	
Serve as a cultural center	96	86	
Offer in-service education to teachers and other professionals in region	97	71	

[a] sample numbered 112.
[b] sample numbered 29.
[c] sample numbered 46.

The reference to studies for graduates in humanidades suggests that the Centers should not serve graduates of specialized secondary schools, such as those in agriculture, business, and industrial technology. Yet graduates from these schools are eligible for admission to the University of Chile, and so to the Centers. The prevailing sentiment among directors is that the Centers, as a result of the reform movement, have gained more significant status as branches of the University of Chile in the provinces.

Functions of the Centers

The inquiry to ascertain the actual functions of the respective Centers, as seen by various groups, was based upon official statements of functions or characteristics of these institutions. Respondents were asked in the interview to express agreement or disagreement that each stated function was actually performed. In each instance the respondent was asked if he wished to add any activity which was not included in the form. The large majority of administrators and also of teachers agreed that the current functions of the Centers were included among those stated. (Table 3).

Students were requested to consider seven functions.[14] More than three-fourths of the student respondents agreed with four of the seven functions.

In general, a higher proportion of teachers affirmed the reality of listed functions than did students. Seven of ten functions were regarded by more than 90 percent of the instructors as being performed in their respective branches. The least acknowledged function, that of offering general education, was recognized by 84 percent of the teachers. On the other hand, the percentage of administrators who indicated that certain functions were being realized ranged from 71 percent to 86 percent. Because specialized administrators are not close to some points of activity, they may be less informed about detailed operations than teachers. Administrators often tend to be critical, or analytical, of the Centers' services and therefore more likely to question the performance of certain functions. Too, they are usually knowledgeable about any budgetary allocations for specific functions. Approximately 15 percent of the administrators neither agreed nor disagreed that the Centers were carrying out the respective functions. The fact remains that differences in opinion between instructors and administrators were considerable.

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[14] The student sample was drawn from the Regional Centers at Arica and Iquique. It included respondents from six different carreras in the second and third year of study.

Variations between the responses of students and those of professors and administrators were even more marked. With regard to six of the seven functions to which they responded, fewer than 80 percent of the students agreed that they were being performed. Responses of affirmation by students ranged from 43 percent regarding language teaching, to 85 percent concerning professional preparation. Furthermore, less than one-half of the students agreed that their respective Centers offered general education or gave instruction in the basic sciences. Whatever the reasons, the students' perceptions varied substantially from those of the teachers and administrators. Some of the differences might have resulted from students' answering according to functions which the Centers actually were carrying out, while instructors and administrators sometimes considered what they believed the Centers should do.

Responses of directors ranged from full agreement with all listed functions to agreement with reservations. Their comments indicated their continuing endorsement of the Centers' offering preparation for intermediate-level careers, as well as for those requiring studies of four or more years. Referring to the rendering of professional services to the community, and collaboration with it on projects, one director replied, "yes and no," adding that this function could be a great deal of work. Exploration of regional resources also drew a "yes and no" reply from the same director. One director said that his Center wanted to do more in serving as a cultural center for the community and the region. He regarded in-service education of professionals as a current function, but he said that the Center could only attempt this. Interviews of directors yielded convincing evidence of a will to move toward effective fulfillment of the Centers' functions. The overriding difficulty was the scarcity of funds and personnel, so that sacrifices were made in one activity for the sake of another.

While personnel, experience, and facilities may vary in University Centers, as well as concepts, definitions, and communications, the plans of study for the different carreras tend to be the same at all eight branches. Results of this inquiry indicate the need for a complete review of the purpose, characteristics, and depth of general education; the nature of the program of instruction in the basic sciences; and the purpose, scope, and features of courses in Spanish and other languages. The range of opinion among groups in the Regional Centers warrants this consideration.

As indicated by the inquiry, the objectives and functions of the Centers have changed little from those the university's Superior Council approved in 1960. Differences and variations in responses do indicate that a number of the generally accepted functions should be reviewed and evaluated carefully. The staffs in the Centers, as well as interested professionals throughout Chile should participate in this major effort. If well done, the evaluation could be as productive as the one envisioned in the early years of the Regional Colleges.

ENROLLMENT TRENDS

Beginning with 168 students at Temuco in 1960, the total enrollment of the Regional Centers advanced to 10,275 in 1970 (Table 4). Except for a slight drop in 1963, the increase was steady throughout the entire period. As additional campuses were established in 1961, 1963, 1965, and 1966, the growth of enrollment was stimulated by the response of secondary school graduates whose communities previously[15] offered limited opportunities, if any, for higher education.

TABLE 4

Enrollment of Regular Day and Evening Students, by year

University Center	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Arica						108	340	461	676	804	926
Iquique						226	171	220	281	250	352
Antofagasta[a]				84	241	317	901[b]	1070	1221	1521	1766
La Serena		141	272	274	328	501	742	994	1219	1447	1541
Talca						463	872	1192	1406	1519	1701
Ñuble							439	667	851	1061	1164
Temuco	168	457	612	511	739	965	1503	1841	2101	2168	2211
Osorno						232	411	469	502	575	614
All Centers	168	598	884	869	1308	2812	5379	6914	8257	9345	10275

Sources: Universidad de Chile, Secretaría Técnica de Centros Universitarios, Boletín Informativo, Año 4, No. 6, Mayo de 1970, p.25.
STCU internal report, 1970 (typewritten).
Universidad de Chile Instituto de Investigaciones Estadísticas, Boletín Estadístico, Vol. X, No. 1, 1966, p.68.

[a] The data do not include enrollment in the conservatory of music, in theatre, dance, and crafts; enrollment in these special programs during 1970 was 323 students, ranging in age from 7 to 45 years.

[b] Beginning in 1966, data include students of the Pedagogical Institute and the School of Social Work, both of which the University of Chile organized in that city prior to establishing the Center in 1963. Their total enrollment in 1966 was 458 students; beginning in 1967, DCCU included enrollment of these two units in the statistics of the Center.

Index of Growth

Using 1966 as a base year, Table 5 presents an index of enrollment growth. During 1966-1970, the combined data for all Centers show a substantial increase each year: the index figure of 191.0 in 1970 indicates a 91 percent increase from enrollment in 1966. Although the base-year numerical enrollments varied from 171 at Iquique to 1,503 at Temuco, the indices of the various Centers are useful as measures of change in the individual situations.

Among the respective campuses, the smallest proportional growth during the period occurred at Temuco. Relatively large by 1966 in comparison with the other Centers, the Center at Temuco thereafter was building upon a more substantial enrollment base. The enrollment trend at Osorno was close to Temuco's. The range for the 1970 index at other Centers extended from 147.1 at Temuco to 272.3 at Arica. At all campuses the total enrollments increased steadily throughout the five-year span, with the exception of a decline at Iquique in 1969.

Also indicated in Table 5 is that the enrollment advances at the seven Regional Centers exceeded those of the University of Chile at Santiago and Valparaíso. From 1966-1969 the enrollment index of all combined Centers rose from 100 to 173.7; the University in Santiago and Valparaíso increased to 132.0, and that of the entire University increased to 141.5. As indicated in Table 6, Regional Centers' enrollment constituted a steadily increasing proportion of the total enrollment at the entire University of Chile, a proportion that grew from 22.8 percent in 1966 to 28.0 percent in 1969.

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[15] Some variations appear among different sources of information on enrollments in the University of Chile. Such differences may occur for internal purposes or because some data were obtained at different times of the academic year. So far as feasible, the author has striven to maintain consistency and comparability in utilizing the numerical data available. Enrollment data for the Regional Centers have been drawn mainly from reports of the Secretaría Técnica de Centros Universitarios of the University of Chile. Other enrollment data have been obtained from publications of the Oficina de Planificación and the Instituto de Investigaciones Estadísticas of the University of Chile.

TABLE 5

Index of Enrollment, 1966-1970

University Centers	Base of 1966 Enrollment	Index	1967	1968	1969	1970
Arica	340	100	135.6	198.8	236.5	272.3
Iquique	171	100	128.6	164.3	146.2	205.8
Antofagasta	901	100	118.7	135.5	168.8	196.0
La Serena	742	100	134.0	164.3	195.0	207.7
Talca	872	100	136.7	161.2	174.2	195.1
Ñuble	439	100	151.9	193.8	241.7	265.1
Temuco	1,503	100	122.5	139.8	144.2	147.1
Osorno	411	100	114.1	122.1	139.9	149.4
All centers	5,379	100	128.5	153.5	173.7	191.0
Santiago and Valparaiso	18,216	100	114.2	128.1	132.0	n.a.
U. of Chile, total	23,595	100	117.5	133.9	141.5	n.a.

Sources: Table 4.
Universidad de Chile Instituto de Investigaciones Estadísticas, Boletín Estadístico de la Universidad de Chile, Vol. X, No. 1, Año 1966, pp.62, 68, 72; Vol. X, No. 2, Año 1967, pp.74, 84.
Universidad de Chile Instituto de Investigaciones Estadísticas, Informativo Estadístico, No. 18, 1968, pp.3-8; No. 20, 1969, p.3.

Calculations by the author.

Note: Comparisons between enrollments in the Regional Centers and those of the University of Chile in Santiago and Valparaíso, as well as totals for all campuses of the university, are based upon data for regular university students, which include day and evening students of the Regional Centers. Data do not include enrollments in post-graduate studies, extension, or programs at the secondary and elementary levels.

TABLE 6

Comparative Enrollments, 1966-1969

Univ. of Chile	1966 N.	1966 %	1967 N.	1967 %	1968 N.	1968 %	1969 N.	1969 %
Univ. Centers	5,379	22.8	6,914	24.9	8,257	26.1	9,345	28.0
Santiago and Valparaíso	18,216	77.2	20,804	75.1	23,340	73.9	24,043	72.0
U. of Chile, Total	23,595	100.0	27,718	100.0	31,597	100.0	33,388	100.0

Source: Same as Table 5.
Calculations by author.

TABLE 7

Annual Rate of Increase of Enrollment, 1966-1970
(Percent of Change from Preceding Year)

University of Chile	1967	1968	1969	1970	Average Annual Rate of Increase (%)
Arica	35.6	46.6	18.9	15.2	29.1
Iquique	28.6	27.7	-11.0	40.8	21.5
Antofagasta	18.7	14.1	24.6	16.1	18.4
La Serena	34.0	22.6	18.7	6.5	20.4
Talca	36.7	17.9	8.0	12.0	18.6
Ñuble	51.9	27.6	24.7	8.8	28.2
Temuco	22.5	14.1	3.2	2.0	10.4
Osorno	14.1	7.0	14.5	6.8	10.6
All Centers	28.5	19.4	13.2	10.0	17.8
Santiago and Valparaíso	14.2	12.2	3.0	n.a.	9.8
University of Chile, Total	17.5	14.0	5.7	n.a.	12.4

Source: Table 4.
Calculations by the author.

Annual Rate of Increase of Enrollment

As suggested by the enrollment index of the Regional Centers, the annual rate of increases has varied considerably among the campuses (Table 7). Recognizing the differences among the Centers in 1966 enrollments, as well as in age, further evidence of steady and appreciable growth may be noted from the average annual increase of 17.8 percent for all Centers combined from 1966 to 1970 (Table 7). This figure was well above the average annual rate of increase of 9.8 percent at Santiago and Valparaíso. Nevertheless, the annual rate of increase for all Centers together did decline steadily during the period. At individual Centers the higher average annual rates of growth were at Arica, Ñuble, Iquique, and La Serena. Talca and Antofagasta were not far behind this group, while Temuco and Osorno lagged considerably.

Distribution of Enrollment among the University Centers

Considerable enrollment variation occurred in individual Centers. In 1970 the larger Centers were at Temuco, Antofagasta, Talca, and La Serena, respectively (Table 8). Temuco had 21.5 percent of the total enrollment; La Serena had 15.0 percent: Ñuble had 11.3 percent; and Iquique had 3.4 percent. Only a few slight changes have occurred in this order since 1967. The tendency has been for the gap between Temuco and the other Centers to become narrower.

TABLE 8

Distribution of Enrollment, 1967, 1969, and 1970, in percentages

University Center	1967	1969	1970
Arica	6.7	8.6	9.0
Iquique	3.2	2.7	3.4
Antofagasta	15.5	16.3	17.2
La Serena	14.4	15.5	15.0
Talca	17.2	16.3	16.6
Ñuble	9.6	11.3	11.3
Temuco	26.6	23.2	21.5
Osorno	6.8	6.1	6.0
All Centers	100.0	100.0	100.0

Source: Table 4.
Calculations by author.

Sex Distribution of Enrollment

In 1970, the sex distribution of enrollment in the eight Centers was 59.1 percent women and 40.9 percent men (Table 9). The proportion of women, in relation to total enrollment in a given year of study, rises steadily from the first year through the fourth year of study in a specific academic year. In 1970 women students were 53.5 percent of the first-year enrollment, and 61.9 percent of the second. The move upward was slight in the third year group and rose to 75.9 percent in the fourth year. Of the modest total enrollment in the fifth year of study, which included only those preparing to be secondary school teachers, 56.2 percent were women.

TABLE 9

Enrollment of University Centers, by Sex and Year of Study
1969-1970

	1969			1970		
Year of Study	Men	Women	Total	Men	Women	Total
First year						
N	1,692	2,285	3,977	1,927	2,221	4,148
%	42.5	57.5	100.0	46.5	53.5	100.0
Second year						
N	1,090	1,637	2,727	1,164	1,890	3,054
%	40.0	60.0	100.0	38.1	61.9	100.0
Third year						
N	807	1,253	2,060	888	1,449	2,337
%	39.2	60.8	100.0	28.0	62.0	100.0
Fourth year						
N	134	336	470	123	387	510
%	28.5	71.5	100.0	24.1	75.9	100.0
Fifth year						
N	40	71	111	99	127	226
%	36.0	64.0	100.0	43.8	56.2	100.0
Totals						
N	3,763	5,582	9,345	4,201	6,074	10,275
%	40.3	59.7	100.0	40.9	59.1	100.0

Sources: Universidad de Chile, STCU, *Boletín Informativo*, May 1970, Año 4, No. 6, pp.28-38; Sept. 1969, Año 4, No. 5, pp.34-40; STCU, Enrollment Report, 1970 (mimeographed).
Calculations by author.

Comparative data for 1967 and 1969 (Table 10), shows a slight increase in the proportion of women students during the period. Clustering around the overall proportion of 59.8 percent in the latter year, the individual Centers registered female enrollment from 44.9 percent at Osorno, to 67.0 percent at Antofagasta. The 60:40 ratio of women to men in the University Centers was nearly the exact reverse of the ratio which existed in the University of Chile at Santiago and Valparaíso. The smaller proportion of men students in the Regional Centers may result from (1) a greater need for men in the provinces to work to support themselves or their families; (2) a tendency for qualified middle-income men students to seek professional carreras offered at the university in Santiago; and (3) a relative lack of alternative educational opportunities for young women. The Regional Centers have offset, to some extent, the comparatively lower enrollment of women in the University of Chile at Santiago. Aside from socioeconomic factors and the proximity of the Centers in the provinces, the carreras in elementary and secondary school teaching, social work, nursing, nutrition, and obstetrics have much appeal to women students (see Chapter 4).

TABLE 10

Comparative Sex Distribution in Enrollment, 1967 and 1969

	1967			1969		
Campuses of the University of Chile	Men (%)	Women (%)	Total (%)	Men (%)	Women (%)	Total (%)
University Centers	42.8	57.2	100.0	40.2	59.8	100.0
Santiago and Valparaíso	58.7	41.3	100.0	61.0	39.0	100.0

Sources: Universidad de Chile, Instituto de Investigaciones Estadísticas, Boletín Estadístico, Vol. X, No. 2, 1967, p.74; Informativo Estadístico, No. 20, 1969, p.3.

Enrollment of Day and Evening Students

In all Centers combined, the regular evening students made up only 5.9 percent of total enrollment in 1970 (Table 11), a considerable decline from the 10.5 percent level in 1969 (Table 25). In view of the relative newness of full-time evening programs in Chile, this situation may be a critical indicator of the future functions and services of the Regional Centers.[16]

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[16] Carrera enrollment of day and evening students is discussed in Chapter 4.

TABLE 11

Enrollment of Day and Evening Students, 1970

University Center	Day		Evening		Total	
	N	%	N	%	N	%
Arica	867	93.6	59	6.4	926	100.0
Iquique	225	63.9	127	36.1	352	100.0
Antofagasta	1,766	100.0	--	--	1,766	100.0
La Serena	1,541	100.0	--	--	1,541	100.0
Talca	1,677	98.6	24	1.4	1,701	100.0
Ñuble	977	83.9	187	16.1	1,164	100.0
Temuco	2,013	91.0	198	9.0	2,211	100.0
Osorno	601	97.9	13	2.1	614	100.0
All University Centers,	9,667	94.1	608	5.9	10,275	100.0

Source: Universidad de Chile, Secretaría Técnica de Centros Universitarios, report, 1970, (mimeographed). Calculations by author.

Enrollment by Year of Study

Generally, 42.5 percent of the total enrollment of the Centers in 1969 occurs in the first year of study, compared to 33.0 percent for the University of Chile at Santiago and Valparaíso, and 35.7 percent for the university as a whole (Table 12). These lower figures are affected by the comparatively extended duration of the large majority of carreras in the metropolitan area. Owing to the recency of the longer carreras in the Regional Centers, as well as the limited number of such specializations, proportional enrollments in subsequent years of study tend to be far less than such enrollment in Santiago. Among the individual Centers, first-year enrollment ranged from 36.4 percent at the Temuco Center to 54.8 percent at Osorno. Variation for the second year of study extended from 21.9 percent at Ñuble to 40.4 percent at Iquique. The higher proportionate enrollments in the first year of study may be the result of unusual growth in the number of entering students or a relatively low rate of retention. (See Chapter 7 for discussion of retention rates.) Generally, the staying ability of women students was higher than that of men (Table 13).

TABLE 12

Enrollment of University of Chile, by Year of Study, 1969

University of Chile	First N	First %	Second N	Second %	Third N	Third %	Fourth N	Fourth %	Fifth N	Fifth %	Total N	Total %
Arica	360	44.8	244	30.3	162	20.2	38	4.7	—	—	804	100.0
Iquique	123	49.2	101	40.4	19	7.6	7	2.8	—	—	250	100.0
Antofagasta	715	47.0	379	24.9	258	17.0	137	9.0	32	2.1	1,521	100.0
La Serena	540	37.3	422	29.2	344	23.8	91	6.3	50	3.4	1,447	100.0
Talca	621	40.9	458	30.1	374	24.6	53	3.5	13	.9	1,519	100.0
Ñuble	513	48.3	232	21.9	282	26.6	34	3.2	—	—	1,061	100.0
Temuco	790	36.4	739	34.1	513	23.7	110	5.1	16	.7	2,168	100.0
Osorno	315	54.8	152	26.4	108	18.8	—	—	—	—	575	100.0
All University Centers	3,977	42.5	2,727	29.2	2,060	22.1	470	5.0	111	1.2	9,345	100.0
Santiago and Valparaíso[a]	7,939	33.0	5,272	21.9	4,458	18.5	3,222	13.4	2,395	10.0	24,043	100.0
Univ. of Chile, total	11,916	35.7	7,999	23.0	6,518	19.5	3,684	11.0	2,506	7.5	33,388	100.0

Source: Universidad de Chile, Instituto de Investigaciones Estadísticas, Informativo Estadístico, No. 20, 1969, pp.10-14.
Calculations by author.

[a] Enrollment of students in the sixth and seventh years of study constituted 3.2% of the total enrollment at Santiago and Valparaíso, and 2.3% of the total for the University of Chile.

TABLE 13

Comparative Enrollment Distribution,
by Sex and Year of Study, in percentages

Year of Study in University Center	1969 Men	1969 Women	1969 Total	1970 Men	1970 Women	1970 Total
First year	44.9	40.9	42.5	45.9	36.6	40.4
Second year	29.0	29.3	29.2	27.7	31.1	29.7
Third year	21.4	22.5	22.1	21.1	23.8	22.7
Fourth year	3.6	6.0	5.0	2.9	6.4	5.0
Fifth year	1.1	1.3	1.2	2.4	2.1	2.2
Totals	100.0	100.0	100.0	100.0	100.0	100.0

Source: Table 9.
Calculations by author.

SUMMARY

Support for the idea of colegios regionales arose from four important situations. First, the University of Chile, like most Latin American universities, harbored an inflexible and tradition-oriented structure. Its network of nearly autonomous faculties and professional schools precluded educational change or a responsiveness to Chile's socioeconomic needs. Second, the program and methods of secondary schools did not correlate with those of the university so that students had little chance to maximize their capacities through schooling. Third, increased demand for higher education had arisen from growth of secondary school enrollments, regional awareness of the need for more educational opportunities, and a commonly held belief that advanced education was the only road to social mobility. The university could not accommodate many of the graduates from the selective secondary schools and potential human resources were being wasted. Finally, growing familiarity with economic development had created an awareness of the need to prepare young people for new occupations.

Moves to establish the colegios universitarios regionales came rapidly and represented a daring educational venture by the University of Chile, which defied traditions of Latin American higher education. They marked an outward thrust to the provinces on the part of the university. Initial phases of development reflected emphasis upon action and implementation, even considerable utilization of trial-and-error tactics. Circumstances within the university and the insistence of people in the provinces often did not allow adequate time for planning and weighing of alternative courses of action.

The new type of institution was designed to serve youth and others in the provinces, including secondary school graduates who came from low-income families and previously had virtually no opportunity to continue their education. Planned functions of the Regional Colleges were to provide studies in general education and the basic sciences as a foundation for continuing with advanced work at the university; preparation for intermediate-level careers through the introduction of short-term programs; adult education and programs conducive to the cultural development of the regions; collaboration in exploring and utilizing resources of the regions and in meeting regional needs; and guidance services and financial aids to students. Reflecting a concern for improved teaching and consequent development of students, the Colleges were committed to concentrating upon securing a high proportion of full-time instructors. The Colleges were not regarded as potential universities.

Administrative action and university reform affected the course of the Regional Colleges. Their transition to University Centers apparently resulted from a desire to integrate them more effectively with the university. The young campuses began to provide longer carreras and became more involved with the faculties and the university. A subsequent transformation of the growing institutions into sedes evolved as one feature of the movement toward university reform. The impact of this transformation will probably not be clear until the evolving organic statute of the university is subjected to interpretation, and the university adopts policies relevant to the sedes in the provinces.

Inquiries and interviews of administrators, teachers, and students in the University Centers included an attempt to ascertain their conceptions of the objectives and functions of the Centers. Respondents expressed a high level of agreement with the objectives and functions which had been developed for the Regional Colleges in the early 1960s. Nevertheless, differences among groups, as well as some disagreement with stated functions, indicated a need for an intensive self-study of the Centers' functions.

One indicator of the development of the University Centers was their steady and appreciable rate of increase in enrollment during the 1960s, and especially after 1966 when the last of the eight Centers was established. Variations in enrollment merit careful attention, for they suggest substantial differences in retention rates or in abnormal spurts of incoming students. The enrollment of evening students indicates a declining activity of a number of Centers in this potentially significant aspect of education. Finally, the University Centers in the provinces have a substantial majority of women students, indicating that the Centers offer special opportunities to women graduates of the secondary schools, or that socioeconomic factors tend to encourage women to attend the University Centers rather than the university in Santiago.

Upon the basis of this explanation of the origins, functions, and transitions of the campuses in the provinces, we now turn to the structure, organization, and decisionmaking in the University Centers.

CHAPTER 3

STRUCTURE, ORGANIZATION AND DECISIONMAKING

Modern educational institutions cannot function well without order. "Order" here does not signify control, regimentation, or stifling of dissent; it does signify a systematic organization and utilization of human material resources formulated for the purpose of achieving commonly acknowledged goals. This implies planning, policy formation, and teaching, research, and community services. A structure and an organization permit improved utilization of specialized competence and acceptable allocations of authority and responsibility in the completion of common tasks.

DIRECTION AND COORDINATION OF THE REGIONAL CENTERS

A System within the University of Chile

When reviewing the origin of the Regional Colleges, Rector González said in 1968 that their establishment appeared originally to be a system of the university, relatively independent and in certain ways detached from the central body of the institution (U. de Chile, Consejo Superior de Centros Universitarios, 1968a). Their installation had been heralded as the decentralization of the university in order to serve people in various regions. The Organic Statute of the University of Chile (Article 1 and 13, section (d)), which the National Congress adopted in 1931, empowered the university to set up educational units or services in order to fulfill its functions. In the outlying areas in the north and south of Chile, the identification "colegio universitario regional" probably signified little to the general public, for the new institutions were introduced by the University of Chile. Specifically, they were adjuncts of the rectory of the university and their educational programs were presented only with the authorization of the faculties of Santiago.

Early Norms and Regulations

Until 1965 the Regional Colleges were directed by the Department of General Studies (DEG) in accordance with norms especially adapted to their respective levels of development and specific programs. Generally, this included the application of general university regulations as well as special regulations for new academic or administrative situations. On many occasions the directors and instructors of the Centers expressed interest in preparing general regulations to define the organization and functions of the Centers and guide their activities (U. de Chile, DCCU, 1968c).

The Department of General Studies

According to the originating decree,[1] the department's functions were: (1) supervision and guidance of general studies in the Regional Colleges; (2) development of programs and courses of general studies that would be offered in the Regional University Colleges (3) internal organization of the Regional University Colleges, definition of functions of their sub-division and personnel, and establishment of corresponding lines of accountability; and (4) application of a suitable system of teaching and evaluation in the general studies of the Regional University Colleges.

The decree thus delegated the authority and responsibility for the internal organization of the Regional Colleges, and especially for development and supervision of programs of general studies, to the DEG. Events soon caused a substantial shift in the Colleges toward programs of training for intermediate-level careers. Authorizations in the decree, and the vigorous support of the rector, gave Director Sálas adequate basis to extend the operations of the department to areas other than general studies.

In addition to retaining the department's original functions, the Master Plan of the Regional Colleges acknowledged the responsibility of the DEG to train Regional College teachers (U. de Chile, DEG, 1964, p.17). Director Sálas herself engaged continually in staff development, budgetary and financial planning, community relations, and construction planning.

An advisory council to consist of representatives of humanistic and scientific areas in the various university faculties was provided for.

The DEG was obliged to maintain continual contact with the faculties and to: (1) inform the faculties about the Colleges, their organization and teaching, the academic and professional background of the teachers, laboratory facilities, libraries and equipment, and other aspects which would assure satisfactory operation of the carreras which the faculties authorized; (2) propose to the faculties new intermediate-level professional careers or transfer programs and present the information necessary to justify such proposals; (3) coordinate the Department's activities with the respective faculties for the development of each carrera and activities related to it; and (4) establish means for cooperation with the faculties through the respective faculty coordinators and specialists. These functional relationships have remained the same through periods of change in organizational entities, except that, since 1965, proposals of carreras and programs have not been limited to intermediate-level carreras and transfer programs.

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[1] Decreto No. 10,544, Universidad de Chile, Santiago, Nov. 28, 1961. Affirmed by Decree No. 7,148 of the Minister of Education, Republic of Chile, July 14, 1962.

Director Sálas and her staff dedicated themselves to extend new opportunities in higher education to the provinces. Prior to her selection as Director, she had been recognized as one of Latin America's leading educators. For DEG staff members and for administrative roles in the Colleges, she consistently sought persons with advanced training who had demonstrated their competence in projects of modern and experimental education.

MOVES TOWARD INTEGRATING THE REGIONAL CENTERS WITH THE UNIVERSITY STRUCTURE

Consolidation with the University

During 1965-1969 a number of changes occurred in the administration and coordination of the Regional Colleges. The Coordinating Department of the University Centers (DCCU), was created in place of the DEG when the colegios regionales were transformed into centros universitarios. The functions of the new department were curtailed so that it became a technical coordinating service in matters pertaining to curriculum and teaching. Then in 1969, the Technical Secretariate of the University Centers (STCU) was founded to replace the DCCU. Meanwhile, steps were taken to strengthen the technical and advisory council for the Centers and to bring their directors into a line relationship with the rector of the university. Increasing formal recognition was given in these processes to the role of the university faculties in reviewing and participating in curricular and personnel decisions. The net effect of this series of actions was to incorporate the Regional Centers more firmly in the organizational and policymaking structure of the university. At the same time, the tendency was to give more authority and responsibility to the directors of the individual Centers, while modifying the functions of the coordinating body in Santiago.

The Coordinating Department of the University Centers

Acting in January 1965 upon the earlier decision of the university Superior Council, Rector González assigned the following duties to the new DCCU (University of Chile Decree No. 467, Jan. 28, 1965.): (1) to coordinate, review, and evaluate the activities of the University Centers, in agreement with the faculties or their representatives; (2) to propose to the university's Superior Council norms for admission of students, and carreras and their courses, jointly with the faculties having jurisdiction over the respective programs; and (3) to propose to the rector, in agreement with representatives of the faculties, appointment of instructors in various carreras.

Formation of a Technical Council

The rector's decree also included provisions for faculty representatives and a technical council similar to one which had been functioning for more than a year. Membership of the new council included the director of the DCCU, representatives of faculties which sponsored carreras in the centros universitarios, and the directors of the University Centers. Each faculty of the university was to designate a representative to serve in relationships with the University Centers. The faculty representatives were given responsibility for passing upon the acquisition of equipment and library materials and the construction of facilities for the carreras. Furthermore, the 1965 Decree specified that the new technical council would advise the director of the DCCU. But, given the authority to make general recommendations to the rector, the technical council had more than a merely advisory relationship with the director of the DCCU. Sessions of the technical council gave the directors of the University Centers an opportunity to communicate as a group with the rector, who presided over the sessions. Agenda items included reports from individual directors, rules governing admission of students to carreras, scholarships for students, selection of teachers and administrators, and programs for the advanced training of instructors. Minutes of the meetings indicate that the rector engaged extensively in the discussions. At the first session González asked the group to study a petition from teachers at the Temuco Center that instructors be represented in the council membership. He said that he did not believe this measure was necessary, since the directors represented also opinions of the teachers and were chief officers in the Centers. At the request of the Association of Professors of the University Centers, the rector changed his opinion in the following year. He then recommended and secured approval of adding two representatives of instructors to the council's membership (U. de Chile, Consejo Superior de Centros Universitarios, 1966, pp.5-6). Referring to the status of the Centers, the rector urged that the University Centers have the greatest possible autonomy within the general plan of their development and in accord with the distinctive features of their respective zones. The technical council, he observed, would be charged with establishing university policy applicable to the University Centers in the provinces (U. de Chile, Consejo Técnico, DCCU, 1965a, p.8).

In commenting at the second session of the council upon the effects of the decree which set up the DCCU, González said that the DCCU should be regarded as an intermediate apparatus between the central organisms of the university and the University Centers. The DCCU had been converted into an exclusively technical operation, charged with considering general problems, coordinating relations with the faculties, and fulfilling duties which the rector assigned. During the formative period of the Centers, all initiatives came from the coordinating body. In the future, he declared, the Centers would be developed into true universities, so that it had become necessary to build an organization for them that would be more or less independent. The rector added that it was necessary in the program of university reform to establish a line of administration for the Centers which would include the rectory and the technical council (U. de Chile, Consejo Técnico de C.U.s, 1965b, p.2).

A Superior Council for the University Centers

The result of technical council discussions about the University Centers was issuance of a new university decree (No. 67) in early 1966. The University Centers in the provinces were made directly responsible to the rector of the university, without prejudice to the delegated rights of faculties to supervise carreras under their respective jurisdiction. Second, a Superior Council was placed in charge of the operations of the University Centers; the council was presided over by the rector, and included the same membership as the former technical council. Third, the decree defined the functions of this Superior Council and the directors of the University Centers. Finally, the functions of the DCCU were revised.

Under this decree of 1966, the Superior Council of the University Centers was assigned the following functions: (1) to study and propose general norms for the regulation of the Centers; (2) to plan the activities of the Centers; (3) to pass upon the courses of study of the carreras that the Centers offer, prior to consideration by the Superior Council of the University of Chile; and (4) to supervise and evaluate the activities of the Centers and to propose to the rector general measures for their improved functioning and development.

In view of the intended powers of the Superior Council of the University Centers, the DCCU no longer was responsible for engaging with the faculty representatives in evaluating all activities of the Centers, or proposing norms of admissions and appointment of instructors. Its duties henceforth would be as follows: (1) to coordinate the instruction of the Centers; (2) to provide the Centers with technical assistance necessary to carry out norms which the Superior Council of the University Centers approves; (3) to evaluate teaching methods in the Centers and take initiatives necessary to strengthen personnel and improve instructional equipment; (4) to inform the Superior Council of the University Centers upon technical and pedagogical matters; and (5) to maintain contact with faculties of the university in order to assure good functioning of the carreras, and to propose creation of new carreras.

By decree, the DCCU became a technical service in matters relating to curriculum planning and coordination of instruction, evaluation and improvement of teaching methods, in-service education and advanced education for teachers, and academic coordination with faculties in Santiago. The DCCU also continued to coordinate and further the development of guidance and occupational information services in the Centers, which was in accord with Rector González' expressed wishes. He sought a closer relationship between the University Centers, on the one hand, and the rectory and the Superior Council of the university on the other.

In retrospect, it appears as if this move was conducive to a more effective linkage between the Centers and the main organisms of the university in Santiago. Even though the administrative and evaluative functions of the DCCU were eliminated or reduced, its operations were defined more succinctly. Its role still was of much importance in the development of the Centers. In view of the limited functions assigned to the DCCU, a reallocation of administrative responsibilities was effected in January 1968. The position of general secretary of the University Centers was introduced in the office of the rector. Responsible to the rector, the secretary was given the duties of supervising the personnel and administrative services of the University Centers, and of acting in accord with instructions of the rector (U. de Chile Decree No. 442, 1968).

Throughout 1967 and during the first several months of 1968, the DCCU was able to function normally. A reform crisis at the university in May 1968 resulted in Rector González' resigning his post. A later report of the DCCU summarizes its position during the remainder of that year:

> This event gave force to a reform movement within the University in which the University Centers stated their wish to become independent from a central authority. This statement definitely altered through 1968 the relations held up to them by the University Centers and the Coordinating Department. As a result, the Department could not carry out its original plans for 1968, had to stop almost completely the technical assistance it gave to the Centers and had to reduce to a minimum the teacher training programs.
>
> During these months, the Department focused its activity in the defense of the idea of higher education that was embodied in the University Centers. In connection with this, the Department prepared informative material, held different meetings and interviews with teachers of the Centers and fought in the meetings of the Reform committees to clarify various misconceptions held about the University Centers (U. de Chile, DCCU, 1969).

The most significant document which the DCCU prepared during this period was the report, "A Contribution to the Development of Higher Education" (U. de Chile, DCCU, 1968d), which contains information and comment about the DCCU and the centros universitarios.

Creation of the Technical Secretariate of the University Centers

Controversy within the reform movement about concepts of the university, along with a petition from the directors of the University Centers, resulted in still another change in the organization of services related to the University Centers in the provinces (U. de Chile, STCU, 1969, p.9). At the beginning of 1969, STCU was instituted as essentially a consolidation of the former services of the DCCU and the general secretary of the University Centers. Marino Pizarro, who had been general secretary, was appointed to head the new organization. According to the decree which established the STCU, its main functions would be: (1) to maintain necessary relationships with and among the University Centers of the provinces and with the faculties and other higher organisms of the university in order to attain a normal development at a level consistent with that of a national university; (2) to study and propose policies of a technical, pedagogical, and administrative character in order to unify the work of the Centers, and to supervise the application of these regulations; (3) to carry out the decisions of the rectory, the university council, and the other higher bodies of the university, in relation to the functioning of the University Centers; (4) to collaborate with the instructional activities of the Centers, providing technical advice and attending to the professional development of the staff and the improvement of instructional materials; (5) to collect and analyze data, and to conduct studies concerning the development of the University Centers; (6) to guide and help the staff of the Centers in the various situations that result from the adoption of university policies; and (7) to inform the faculties, university bodies, and institutions outside the university about the organization, functioning, characteristics, and activities of the University Centers (Ministry of Education Decree No. 3,004, April 2, 1969).

The STCU had three new duties which had not been formally assigned to the DCCU, to collect and analyze data, to conduct studies, and to inform institutions outside the university about the University Centers. The new decree therefore gave recognition to what, in fact, had been done to some extent by the DEG and the DCCU since 1961.

An assignment of major importance was that STCU would work toward a normal development of the Centers at a level consistent with that of a national university. Precisely what does "level" imply? In the context of the reform movement, it suggests no differentiation in quality of programs among the sedes of the programs, or in comparison with like carreras at Santiago. If this is the case, the statement would be an additional motivation to do what the Centers have tried consistently to achieve in the past. If the statement implies that new and experimental short-term carreras will be discouraged, it could expedite any inclination of the Centers to be miniature replicas of the university in Santiago.

Prospects of Future Coordination

The Superior Council of the University Centers continued into 1970 while the elected transitional university congress pondered upon the issues of a proposed new organic statute for the University of Chile. Membership in the council had been enlarged to include the 1968 directors of the Centers, representatives of faculties, the general secretary of the University Centers, the directors of the departments of university extension and of social action, and representatives of the instructors of the University Centers. The future of the Superior Council of the Centers, and indeed of the STCU itself, was to be explicitly decided by the statute, or by decisions taken in accord with it by the constituted university authorities.

The University Centers through their representatives and spokesmen sought and obtained status as sedes of the university. They wanted a high measure of independence, direct representation on the university policymaking bodies, and, generally, absence of interference or control by a coordinating or intermediate service organism in Santiago. The degree of independence was not yet determined, but, as sedes of the university, the former Centers did have direct representation on the two major transitory university bodies. By 1970, opinions from the campuses in the provinces had changed enough to indicate considerable support for the continuation of a technical service organization such as the STCU. Interviews with directors in the Centers brought out the prevailing opinion that a service agency was needed to provide technical assistance and to maintain continued communication and coordination among the sedes. As a matter of fact, the directors of the regional campuses in January 1970, acknowledged the STCU as a necessary technical organization which was serving their needs through its activities of collaboration and coordination (U. de Chile, STCU, 1970, p.6). A commitment to maintain and extend the preparation for middle-level careers would in itself warrant continuation of technical services in curriculum development, improvement of teaching, evaluation, and guidance. To meet a growing need, and perhaps to offset criticism of providing technical services only to sedes in the provinces, the university may wish to extend such services optionally to its departments and schools in Santiago and Valparaíso.

ORGANIZATION AND ADMINISTRATION OF THE UNIVERSITY CENTERS

A basic scheme of operations existed in 1960 when the first Regional College opened at Temuco. The plan was contained in the proposal for establishing the institution, as approved by the Superior Council of the University, in March of that year and included statements of functions, requirements for admission, and other features of the institution to be founded. It was widely distributed among staff members of the new Colleges.

In July 1961 the first proposal of general regulations was prepared. This was forwarded by the DEG to the Colleges at Temuco and La Serena for the consideration of their directors and subdirectors. Subsequently a revised set of regulations was written. The general secretary of the university reviewed and edited this document in 1963, proposing to present it for final action to the university's Superior Council. This step was not taken because the development of the Colleges was conducive to a number of changes in organization and operation. Meanwhile, during 1961-1963, the DEG issued specific regulations to apply to each of the following subjects: teaching personnel, guidance workers and guidance services, heads of carreras, and internal organization of the Colleges (U. de Chile, DCCU, 1965b).

From 1963 to 1965, directors of the Regional Colleges considered various aspects of the internal organization of the individual Colleges. Subjects included plans of organization, review of organizational experiences, petitions of teachers on the formation of an association, and channels of communication within each College, among the Colleges, and between the Colleges and the DEG. As early as 1963, the Directors considered a plan of organization which included a technical council of the Regional Colleges and in each College departments of academic studies, technological studies, guidance and admissions, and adult education. It was agreed that each director would use his discretion regarding the appropriateness and timing for the introduction of these departments. Shortly after the transition of the colegios regionales to centros universitarios, and the establishment of the DCCU, the latter body distributed the General Regulations of the University Centers to the Centers (U. de Chile, DCCU, 1965b).

The General Regulations of 1965

The general regulations are detailed statements of the functions, organization, position descriptions, and basic policies and procedures of the Centers. The organization plan of individual centers included: director, subdirector, technical council, department of studies, department of services for students, department of university extension, and department of relations with the community.

The director was responsible for the Center's operations and progress. The subdirector was the collaborator of the director in pedagogical and administrative matters. The technical council advised the director, and consisted of the director, who presided, the subdirector, coordinators of the four departments, chiefs of several coordinating services and sections, and representatives of carreras from agriculture, industry, administration and commerce, health, social work, and education. The organization and activities of each major department were specified. An education specialist was to serve as coordinator of the department of studies, which had sections dealing with academic studies, professional studies, and the library. The department of services for students encompassed guidance and admission, welfare and social work, and student activities. University extension included evening professional studies, cultural extension activites, and programs for continuing education of professionals (perfeccionamiento profesional). The coordinator of the department of community relations was assigned responsibility for studies of the region, programs of social action for community development, and publications.

The general regulations gave considerable attention to the organization of academic work. The document specified functions of

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instructors and heads of carreras. An unusual section was devoted to defining and guiding work groups of instructors. Numerous suggestions were given for seminars and projects in methodologies, instructional materials, evaluation, exchanges with colleagues, class visitations, interdisciplinary problems, student-teacher relations, review of regulations, and proposals for the improvement of the Centers.

The regulations emphasize an important difference between the university's professional schools and the University Centers in the provinces. Each of the former offers only one carrera, while the Centers offer a variety of carreras. At each Center carreras must be organized under one administration, which requires a coordination of efforts from various fields and carreras to achieve common objectives.

The general regulations have been significant as a determinant and guide for the internal organization at each campus. The main fabric of the organizational plan was evident at all Centers. Considerable discretion evidently had been exercised in determining the appropriateness of specified positions and organizational relationships at the Centers. It was anticipated in the general regulations that personnel for many of the listed positions also would have teaching assignments. The strength of the Centers' internal organization doubtlessly suffered from neglect and strife during the long 1968-1970 preoccupation with change in the university structure and with the status of the Centers themselves. The regulations were based upon the experience and deliberations of administrators and staff members of the Centers, together with the former DEG and the newly created DCCU. Dr. Sálas, as director of the latter organization, wrote in her transmittal letter to professors that application of the regulations would permit instructors to participate in planning all activities of the Centers and to influence their development.

A Restatement of Principles and Structure

At the threshold of major reform activities beginning in 1968, Francisco Salazar, the new director of the DCCU and formerly director of the Temuco Center, presented a DCCU statement on the nature and structure of the Regional Centers to their Superior Council (U. de Chile, DCCU, 1968c). It included several important principles which had guided the Centers and that should be reflected in their organization: (1) university community: the active participation of administrators, professors, students, alumni, and citizens; (2) integration: the association of students of different carreras in the same studies of basic sciences and general education, reflecting a feeling of unity; (3) academic excellence: the permanent attitude of striving toward the highest level of university achievement, including a constant concern for the improvement of teaching techniques and the study of educational problems; (4) guidance: an aspect of democratization of education, an improved form of admission to the carreras, and a better realization of the capacities of students; (5) socialization: achieved through different forms of recreation and service to the community, as well as within the classroom; (6) solidarity: all forms of assistance which permit qualified students access to university life and to continued study; (7) university extension: the continued education and promotion of cultural expression in the community; and (8) functionalism: the selection of professional carreras and activities that strengthen human and material resources, in order to solve problems of regional and national development.

During most of the decade of the 1960s, certain of these concepts distinguished the Centers from the University of Chile in Santiago. Most notable of these were programs for "integration" of students in all carreras, guidance services, advancement of evening studies for employed adults, and establishing carreras which were intended for the respective regions. The continual emphasis upon teaching effectiveness and the upgrading of instructors has been an outstanding feature of the Centers' concern for the long-range goal of academic excellence.

Having summarized basic concepts of the Regional Centers, the DCCU statement outlined the features of internal organization in the Centers. The plan presented was largely a summary of what had been established by decree, the 1965 general regulations, or practice. It referred to the functions of the directors of the Centers and also the form and character of advisory bodies, departments, functionaries, and offices of the Centers. According to the 1966 decree, the director's duties were: (1) to inform the rector and the university Superior Council of the status of the Center and to propose measures necessary for attending to its development and to the best use of available resources; (2) to direct and supervise the work of the Center; (3) to administer the funds, equipment, and real property assigned to the Center; (4) to coordinate the work of different organisms which make up the Center; (5) to propose annually to the rector the budget of the Center; (6) to recommend to the rector appointment of the personnel of the Center; (7) to further the welfare of students; and (8) to maintain order and discipline in the functioning of the Center, being able to suspend examinations up to one year for those students who deserve such a measure.

A technical council and a council of instructors were proposed as advisory bodies to work with the director of each Center. The technical council would include in its membership representatives of the council of instructors, and the director would preside over each council. In recommending a council of instructors, the DCCU gave official recognition to the importance of groups which had existed in the Centers for several years. Furthermore, Rector González supported participation of instructors in decisionmaking on the general problems of the Centers (U. de Chile, Consejo Superior de Centros Universitarios, 1968a).

Finally, the DCCU document listed five departments and several offices to carry on activities of the Centers. This plan was somewhat different from that set forth in the general regulations: (1) professional training--to administer the carreras of the Center; (2) technical and general studies--to apply instructional policies, study teaching practices, advance programs of professional development, and coordinate programs in basic sciences and general education. The librarian is responsible to the chief of this department; (3) guidance and services for students--to provide guidance, admission, and occupational information services to students, as well as attending to welfare, recreation, and sports; (4) university extension--to develop activities of extension, regional research, professional development, social action, arts presentations, and publications; and (5) academic administration--to allocate materials for teaching activities, maintain a register of students, and supervise nonacademic personnel. Each department would be headed by an instructor selected by special competition. Special offices in a Center would include accounting, university relations, and evening programs.

Compared to the 1965 general regulations, the newly announced organization introduced a number of modifications. Instead of a central department of studies, the plan included a department of professional training and a department of technical and general studies. It also specified a department of academic administration, which the general regulations included as a section under the subdirector. The department of university extension combined the services of that department and the department of community relations in the earlier plan.

Below the level of the director, it seems to me that two major factors in the organization of a number of Centers during 1968-1969 were the coordinators of studies and the coordinators of guidance and admission. The absence of a subdirector in the 1968 statement, along with the division of responsibility for curriculum between two departments, would weaken similar coordination among the carreras, the sciences and general education, and now the subject-matter departments.

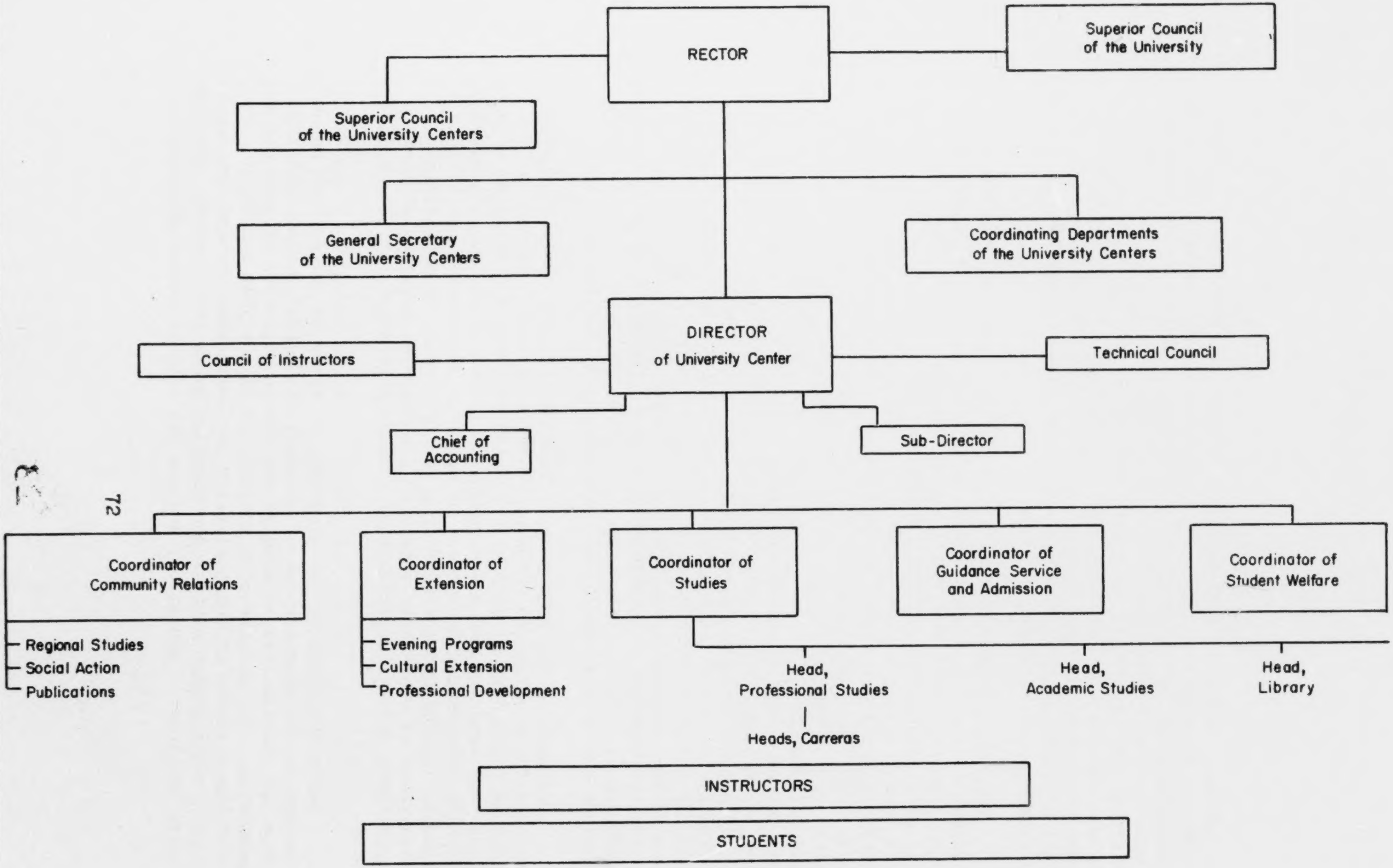

RECTOR
Superior Council of the University
Superior Council of the University Centers
General Secretary of the University Centers
Coordinating Departments of the University Centers
DIRECTOR of University Center
Council of Instructors
Technical Council
Chief of Accounting
Sub-Director
Coordinator of Community Relations
Regional Studies
Social Action
Publications
Coordinator of Extension
Evening Programs
Cultural Extension
Professional Development
Coordinator of Studies
Coordinator of Guidance Service and Admission
Coordinator of Student Welfare
Head, Professional Studies
Heads, Carreras
Head, Academic Studies
Head, Library
INSTRUCTORS
STUDENTS

FIGURE I. ORGANIZATION OF THE UNIVERSITY CENTERS, UNIVERSITY OF CHILE, 1968.

Sources: Universidad de Chile, Departamento Coordinador de Centros Universitarios, "Reglamento General de Centros Universitarios", 1965; University Centers

Note: The organizational pattern is designed to be representative, but details vary among different Centers.

Perhaps the combination of guidance and welfare services may occur under one department, as proposed in both plans, but the situation in the transitional period of reform provided little evidence of a working relationship between these two important services. Figure 1 shows an organizational structure characteristic of the University Centers in 1968.

The Impact of University Reform

During 1968 and 1969, the University Centers in the provinces were immersed in the turbulence, conflict, and deliberations of the movement toward university reform. Student and instructors' organizations were all preoccupied with the process of decisionmaking within the university. The work of reform commissions, university-wide assemblies, and use of referenda resulted in a number of commitments concerning the objectives, functions, and structure of the university. Subsequently, in 1970, the Provisional University Congress began to prepare a final proposal for a new organic statute of the University of Chile. Parts of the proposal were expected to reflect results of another university-wide referendum which the congress arranged in July 1970. Certain trends of agreement then appeared: (1) establishment of sedes in the provinces; (2) tri-partite government in organisms of the university and its sedes, with membership constituted principally by elected representatives of professors, students, and nonacademic personnel; (3) representation of the sedes in the provinces in the principal policymaking and administrative bodies of the university; (4) election of officials and of representatives to bodies of the university and its sedes, except for ex officio membership of, for example, chief administrative officers on the normative councils and the administrative committees. Votes of the three segments of the university and the sedes to be weighted as follows: academic, 67 percent; student, 25 percent; nonacademic, 8 percent; (5) prescription of a plenary assembly, a normative council, a vice-rector (chief officer), and a general secretary in each sede; and (6) departmentalization of the academic organization, to include an assembly, a director, and a normative council.

In the absence of a finally approved new organic statute of the university, which must be passed by the national congress and affirmed by the president, it is necessary at the time of this writing to consider the proposed statute as it was emerging at the time of the university-wide referenda in mid-1970 (U. de Chile, Congreso Universitario Transitorio, 1970, pp.3-38). It seems probable that the main lines of that document, together with the outcome of the referendum voting, will be honored in legalizing action by the national government. For the university as a whole, the situation so far indicates that the projected statute will specify in the structure a university assembly, a superior normative council, an administrative committee, a rector, and a general secretary. The council will be a principal policy-making body of the university. Its functions will include approval of the budget, modification of sedes and faculties, and advancement of the development of teaching, research, and extension throughout the university. Such actions will involve review of the annual plans of the sedes, evaluation of their results, and a regard for the national plans of social and economic development. The academic members of each sede will be represented in the normative council (U. de Chile, Mesa Directiva de Reforma, 1968, pp.39-45), and students and nonacademic personnel of the sedes will participate in universitywide elections of their respective representatives.

In the sedes, the group authorities will be as listed above, plus a possible administrative committee. The principal officer will be a vice-rector of the university. Still pending is the determination of the future of existing departments and services such as academic and professional studies, guidance, student welfare, university extension, and academic administration.

The functions of the normative council of the sede will include: (1) approval of policy and regulations for the sede in accord with the context of general university policy; (2) establishment of budgetary allocations to departments and services in accord with programs and resources approved by the university's Superior Normative Council; (3) resolution of conflicts among organisms of the sede; (4) decisions upon the creation of dependent organisms and the designation of its staff; and (5) carrying out of functions assigned by higher authorities of the university.

Membership of a sede's normative council will include the vice-rector, the general secretary, academic representatives elected by the departments, instructors elected by the entire academic staff of the sede, and students and nonacademic personnel representatives elected by their respective constituencies. An administrative committee of the sede will have powers delegated by the normative council. Elected by and from the members of the normative council, the committee will collaborate with the vice-rector and the general secretary of the sede by completing specific assignments, coordinating academic activities, authorizing budgetary adjustments, and resolving urgent problems that require immediate attention. The administrative committee will report periodically to the normative council. According to the 1970 referendum vote, administrative committees in the respective sedes will be authorized only by a majority vote of the Superior Normative Council of the university.

Since one of the ideas of university reform was to divest individual officers of excessive authority, it is not surprising that the role of the vice-rector is not yet well-defined. In 1969 a number of the directors of the Regional Centers individually expressed their uncertainty about the role of the vice-rector and their perplexity about the problems of functioning without assigned authority. According to proposals pending in mid-1970, the vice-rector's functions will be: (1) to represent the sede, and to call and preside over the normative council, the administrative committee, and the assembly; (2) to propose policies, programs, their budgets, and the plan of work of the sede; (3) to assure conformity with policy in the execution of the budget and the program of activities, and administrative actions; (4) to carry out approved policies in the academic functions and to propose changes that are judged necessary; (5) to report periodically to the normative council; and (6) to do all that regulations indicate. Apparently the vice-rectors will be able to preside, to propose, and to safeguard the implementation of policies. They may be able to appoint academic personnel and functionaries. Other forms of authority in sede actions evidently will rest with the normative council, and, as appropriate, with the sede assembly, administrative committee, and departments.

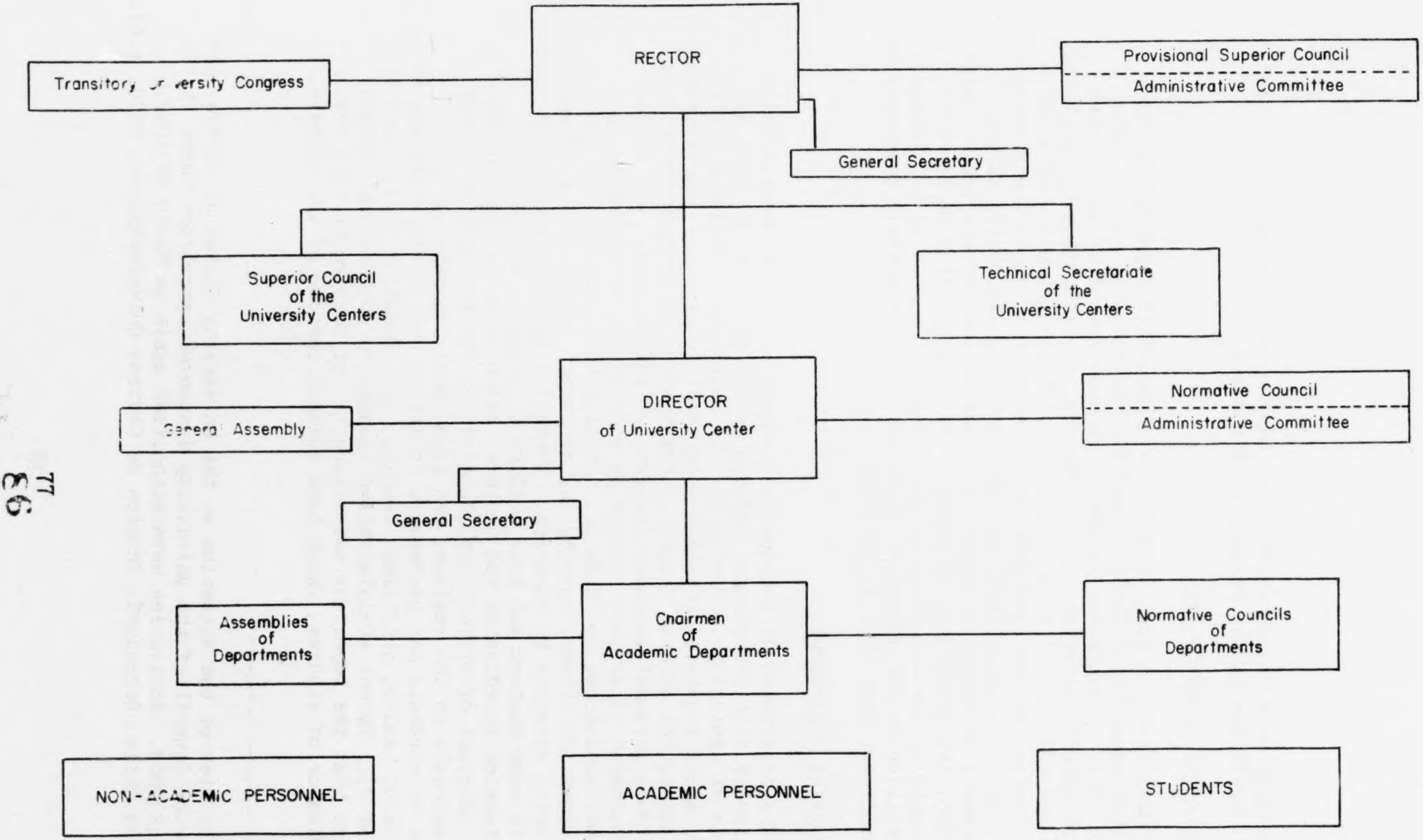
Under the proposed university statute as it was developing in 1970, departments were regarded as the basic academic units of the university structure. They evidently will be charged with projecting, guiding, organizing, realizing, and evaluating research, teaching, artistic creation, and extension in their fields of study. Authorities of the departments will be the assembly, the normative council, and the director. The director will have the same functions at the departmental level as does the vice-rector for the sede as a whole. The vice-rectors and the general secretaries of the sedes, as well as the rector and the general secretary of the university, will be elected for a term of four years. Directors of departments will be elected for two years. These officials may be removed by a two-thirds majority of the respective assemblies voting through secret ballot (U. de Chile, Congreso Universitario Transitorio, 1970).

I do not presume to report or analyze the many facets of the University of Chile reform movement, but the activities of that period cannot be ignored in dealing with the University Centers of the provinces. Reform deliberations have emphasized a revised university structure. Oscar Vera, a leading Chilean educator and director of the office of planning of the University of Chile, observed that for many the concept of reform is that of change in the structure of power, academic organization, and goals of the university. He held that a new statute alone will change little, for university reform is a continuous process. Authentic reform of the university presupposes a reform of the universitarios: students, professors, and nonacademic functionaries. Reform lies in the democratic and direct participation of everyone, not so much in their use of power, as in their modifying attitudes and assuming new responsibilities in the performance of tasks (Vera, 1969, p.210).

Enrique Paris-Roa, president of the executive board of the national plenary assembly of reform in 1968, expresses a somewhat different view of the importance of university structure in the reform movement. He declares that a new structure does not constitute the basic change that a new university requires; during the process of university reform different groups considered the structure as fundamental and tried to turn ideological confrontations into issues of a technical and administrative character (Paris-Roa, 1969, p. 152). A third commentator on university reform notes that the reform movement in the university has assigned the basic functions of the university to the new academic departments; the departments will execute these functions to the extent that their members have a conscience regarding the necessity of doing them. In any event, Miras states, they will not go beyond their fields of specialization (Miras, 1969, p.114). I endorse the sentiments of Vera and Miras. This is not to deny, however, the importance of a new university **ate future. As university reorganization plans sometimes provide, the statute may include a provision for formal review of the university structure within a few years.**
within a few years.

Election of Officials and Representatives to Councils

Prior to the 1970 referendum, a major activity of the University Centers was a systematic effort to reorganize the structure for decisionmaking and administration (see Figure 2). In compliance with the reform principles which had been accepted within the university, each Center moved to form a normative council, a technical or administrative council, and academic departments appropriate to its educational program. Elections were held in order to select directors (the title of vice-rector was not yet legalized by a new university statute), general secretaries, department chairmen, and representatives to the various councils. The normative council at one Center had 20 members: the director, general secretary, and proportional representation of instructors, students, and nonacademic personnel. Nine members made up the administrative council: the director, the general secretary, academic representatives of subject-matter categories, and students. The approved proportional weighting of votes and representation was observed in the elections. With the probable exceptions of the Centers at Osorno and Ñuble, where controversy and



RECTOR
Transitory University Congress
Provisional Superior Council
Administrative Committee
General Secretary
Superior Council of the University Centers
Technical Secretariate of the University Centers
DIRECTOR of University Center
General Assembly
Normative Council
Administrative Committee
General Secretary
Assemblies of Departments
Chairmen of Academic Departments
Normative Councils of Departments
NON-ACADEMIC PERSONNEL
ACADEMIC PERSONNEL
STUDENTS

FIGURE 2. BASIC ORGANIZATION OF THE UNIVERSITY CENTERS, UNIVERSITY OF CHILE, 1970.

Note: The organizational structure of the University Centers was designed to be in accord with the developing proposal of the new organic statute of the University of Chile.

instability were characteristic for many months, the general councils were functioning in the Centers at the close of 1969.[2]

Formation of Academic Departments

Identification and organization of academic departments were principal concerns of Center councils, instructors, and students during 1969. Departments tended to include groups of disciplines such as natural sciences and mathematics, social sciences, languages, arts, and education. As a compromise with the interests of those participating in the carreras, some Centers introduced departments in agriculture, administration, and health, while others formed departments of single disciplines. Some of the Centers sought guidance from the university in order to resolve problems of identity and number in the formation of departments. In most of the Centers the decision on the number of departments was reasonably conservative --usually not more than 8, but ranging from 4 to 15.

The Service Departments

The department of guidance and admission in the Centers deals principally with educational and vocational guidance and with the program of admissions. Typically, the department maintains information about students, provides vocational information, participates in teaching the general course of orientation to university studies, and offers personal guidance insofar as time permits. The office or department of student welfare in each Center concentrates upon economic assistance to students. It also is concerned with the development of student housing and arranging for provision of medical and dental services to students. Extension services are highly organized in some Centers and less evident in others. A department of extension coordinates the Centers' cultural activities in the zone, programs of professional development for teachers and other professionals in the regions, and occasional programs of social action by students and professors to assist and inform residents in matters of health, nutrition, housing, and community development (see Chapter 9). Recent administrative changes in some of the Centers suggest that the important activities of the subdirector and the coordinator of studies, which have existed in some of the Centers, may be absorbed by the general secretary.

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[2] In view of the situation at the University Center at Osorno, the Superior Council of the university suspended operations there at the end of 1969. Activities were authorized again in March of 1970. (U. de Chile, Secretaría Técnica de Centros Universitarios, 1970, p.6).

The future of the service departments, usually under the chief campus officer, may differ in the individual sedes. Their existence and location in the sede structure is yet to be determined. It is probable that they will be linked closely to the academic departments, but under the general direction of the administrative council, the vice-rector, or the general secretary.

Some Common Problems

As these organizational changes were introduced in the provinces, each Center faced a common set of problems in 1969. The responsibility and authority of the director were yet to be resolved, even tentatively, by university deliberations. Similarly, the newly formed councils and departments were attempting to clarify their respective functions and jurisdictions. Clearly, reform decisions tended to place responsibility for policymaking at all levels in the hands of mainly elective councils. But the delineation between policy formulation and administrative action is neither simple nor clear in practice. Dedicated, skillful, and probably continuous collaboration of administrators and councils will be essential at sede and departmental levels.

The university commitment to tripartite government presented an opportunity to develop policies and programs that would truly reflect the desires of professors, students, and nonacademic personnel. On the other hand, their tendency in many cases to vote by political party affiliations presented a threat to any movement or coalition devoted to the advancement of higher education. Much insight, and probably more confrontations, will be necessary before opportunistic and political interests may be subordinated to constructive development of the sedes in the provinces. The large number of independent professors and apolitical students should be a help in striving for solutions. This does not imply a plea either for consensus or for limiting dissent. Freedom to dissent is vital to a free institution.

Voting results in the July 1970 referendum do indicate that a substantial majority of the professors differ consistently from a narrow majority of the students. This is not necessarily bad. A less promising fact at this stage of university reform is that 26,725 votes were cast in the 1970 referendum. Given a total potential vote of approximately 55,000 persons in the university community, the balloting showed an abstention of approximately 50 percent (El Mercurio, July 15, 1970). If continued, this rate of abstention, or withdrawal, could give abnormal power to the relatively few who gain the majority position. And those elected under such circumstances could hardly be secure or confident in their positions.

Organizational changes in the sedes of the provinces gave precedence to the new departments and so reduced the prestige of the heads of carrera. The subscription to departmentalization implies incorporating the carreras within or among the new units. In a few cases such as teacher education, the carreras are closely identified with a departmental field. Still, many chiefs of carrera, who have been important in the Center structures, declared in 1969 that their positions were defunct, or about to be made so. On the other hand, directors were well aware of the need for some organizational mechanism which would safeguard the maintenance and development of carreras, which are the bulwark of the Centers' curriculum.

Even though officials may be removed by two-thirds vote of the pertinent assembly, as in the projected university statute, a fixed term of four years for directors should be conducive to increased stability of administration. Since the founding of the various Regional Colleges, the average tenure of directors has been about three years.

RESPONSES ON ADMINISTRATION AND DECISIONMAKING IN THE UNIVERSITY CENTERS

As part of the field inquiry in this study, interviews of administrators, heads of carreras, and instructors of the University Centers took place in 1969 during a period of campus elections and provisional reorganization. Rather than focusing only upon heads of carreras at the lower administrative level, it was necessary also to interview a number of the newly chosen department chairmen. Questions were designed to secure information about the organizational structure and processes of decisionmaking, participation in administration, channels of communication, and professional development for specialized administrators.

Views of Directors

The directors conceived of their functions as comparable with those proposed in the reform, except they did not indicate any specific responsibility to the councils which had been formed. None of the directors expressed any reluctance to work with the developing organization. Neither did any suggest that their future role would be essentially that of carrying out decisions of the new councils. Directors described their duties as follows: (1) supervise functioning of all departments and carreras; (2) preside over councils of the Center; (3) manage funds allocated to the Center; (4) represent the university in the community, the region, and in dealing with the local government; (5) guide the work of the Center and resolve problems of technical services and other areas; (6) propose and facilitate creativity and improvement in all aspects of the work of the Center; and (7) see that the Center complies with policies concerning teaching, research, extension, and other matters.

These activities are quite similar to those listed in the preliminary proposal of the new university statute. One director observed that he had much authority and influence and that his decisions were received with respect by the Center's personnel. Another said that he was the representative of the Center; he regarded himself as the chief officer of the Center in relation to all personnel.

Since the proposed university statute was in the formative stage at the time of the inquiry, considerable variation still existed in the form of administrative organization. Each director indicated that his Center was trying to comply with the principles of the university reform movement. A number of the directors recognized the need to incorporate into the sede structure the coordinators of the carreras, as well as the chiefs of guidance, student welfare, extension, and the library. One director acknowledged the primacy of the normative council for decisions on policy, but he said that the fundamental operating bodies were the department of academic administration and the council of the carreras. The council included in its membership the director, the coordinator of studies, chiefs of carreras, and the heads of guidance and of student welfare services.

Views of Other Administrators

In the interviews an attempt was made to ascertain the administrators' involvement with other functionaries and with councils or committees in the Centers. Although these administrators were generally responsible to the director, a minority reported that they consulted him in relation to problems that had to be resolved. However, a majority of the entire group, most notably the coordinators of studies and the coordinators of guidance, consulted chiefs of carreras about problems. Those respondents exclusively identified with guidance (orientación) or with student welfare (bienestar) indicated that they had little relationship with one another. A minority of those in student welfare reported that they consulted the guidance workers on various problems. Only one in guidance observed that there were consultations with student welfare. The head librarian of the Center tended to consult either the Center's director or the coordinator of studies. Usually the former directly controls any proposed expenditure for library materials. Finally, coordinators of extension and the majority of chiefs of student welfare said that they consulted with people in the community in dealing with their respective tasks. The chiefs of student welfare also noted that they consulted families of students.

In view of the uncertain position of these institutional and service department administrators in the developing structure of the sedes, it was pertinent to ascertain their membership in existing councils as a result of their specific assignments. Several of them replied that they belonged to a sede council. Six indicated that they were a part of a service committee or a council of the department of student services. More than one-third of the 28 respondents reported that they did not participate in any council. The institutional administrators also were asked, "In your opinion, what is the role of an administrator (such as yourself) in the administration of the Center?" Nearly one-half of the respondents replied that their role was to participate in administration through departments and councils of the Center. A number of them stated that such participation should be limited to the field of their specific responsibility.

Some information about the background and activities of the service department administrators may indicate the professional caliber of their services. Nineteen of the 28 respondents held university degrees in fields specifically related to their functions--library science, guidance and counseling, and social work. The coordinators of studies had training and experience suitable for their posts. All but two of the whole group had more than five years of experience in educational service, while nearly the same number had worked more than three years in their respective Centers. Only four members of the group did not work full time at their respective Centers; a bare majority of the respondents did teach five or more hours per week. Of the 19 who were teaching, 10 were engaged in subjects related to their administrative charge, including the guidance workers who were teaching the course on orientation to the university. The large majority of the administrators had been employed originally at the respective Centers in their current positions.

Respondents in charge of guidance, social welfare services, and the library were asked to indicate how they tried to keep abreast of changes and research in their respective fields. All the responding librarians said that meetings and conferences on mutual problems were facilitated by the STCU. Several librarians and chiefs of guidance said they referred to publications. Librarians also mentioned taking short courses during vacation periods. Most of the guidance directors named the National Association of Guidance Workers in the

University Centers as a source of information and a means for getting together and discussing common problems. The majority of coordinators of student welfare services, and also several of the heads of guidance services, listed the STCU and university schools in Santiago as helpful sources. A number of those in student welfare work reported that opportunities for discussion come through meetings with other social workers, conferences with those from other Centers, and personal communication. One or two in the respective areas indicated that their information was not regularized. A few had contact with professionals or with associations in the region.

These responses indicated considerable versatility and resourcefulness in seeking to maintain a high level of professional performance. Interviews and supplementary information did disclose a hunger for good professional journals and for periodic professional meetings. A planned program of seminars of these groups of specialists in the Centers could result in considerable shared research and productive efforts toward strengthening of their services.

Views of Instructors

Besides institutional administrators, a sample of instructors and heads of carreras were asked what they thought should be their engagement in the direction and administration of the Centers.

A majority of the sample of 112 instructors responded that they should act through departments and councils of the Centers. Others, 12 percent or less giving any one of the responses, said that participation should extend to informing themselves, or to working in their respective specialties, or to making decisions on carreras, budgets, and selection of personnel. Five percent of the teachers reported that they should not participate in administration. No significant variations appeared in responses from the different Centers.

Views of Heads of Carreras

The prevailing processes for decisionmaking were in transition at the time of the field inquiry, so the newly elected department chairmen generally could not respond to various situations. Therefore, the following summary reflects the participation of the 35 heads of carreras who were interviewed in seven Centers. It is recognized that practices might well change as department chairmen in academic areas fully assume the roles that will be assigned to them.

Chiefs who were also instructors were given a number of situations regarding curriculum, teaching responsibilities, personnel, and students and were asked to indicate their participation in deciding upon each subject with respect to their own carreras. There were the following possible choices: You decide it yourself exclusively; you decide it yourself with a committee or group; you make observations and the administration of the Center decides; you do not participate in the decision, which is taken within the Center; the question is decided according to regulations, programs, and plans of the university.[3]

The most prevalent procedure for reaching a decision within the carrera was working with a committee or group, which might include all instructors in the carrera. Respondents used this method most frequently in dealing with the establishment of programs of extension, arranging research projects, and making assignments of teaching to instructors. University policies and programs were most often given as the principal basis for decision, especially with reference to admission requirements and to problems of the carreras. Many respondents reported use of the two procedures, guidance by university regulations, and consultation with a committee, in considering carrera questions.

Considerable spread occurred in responses pertaining to determination of specifications for a new teaching position, selection of instructors, fixing the number of students to be admitted to carreras, and transferral of students to another carrera in the Center. Methods which carrera chiefs adopted in such cases tended to be committee consultation, comments to the administration (the director or his delegated official) or no participation at all. Respondents said comments to the administration of the Center were used most frequently in relation to employment of instructors and approval of student transfer. Rarely did carrera chiefs indicate that they made a decision alone, although one or two respondents did report that they reached some decisions by themselves in matters not related to carreras, student admissions, and budgets. While in most of the situations a number of respondents replied that they did not participate in decisions, the greatest absence of participation was in the proposal and application of the budget. Historically, this activity has been concentrated in the hands of the director.

Opinions Concerning Communications

The effectiveness of official communications in an educational institution may serve as an indicator of the understanding which the academic community has of issues and policies. Ninety-four percent of the sample of instructors reported that their respective Centers did have channels of communication. The responses of instructors concerning the amount of information available to them in the Centers about certain important subjects are summarized in Table 14. The results give little reason for complacency among any of the Centers.

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[3] Owing to a revision of this set of questions, certain situations were not presented to those interviewed at Arica and Iquique; these exceptions were establishment of research programs, consideration of student transferrals, and fixing norms for grading student achievement.

TABLE 14

Instructors' Opinions of Available Information, in percentages[a]

Subject	Sufficient	Insufficient	No response	Total
Plans and policies of the Center	53	45	2	100
New regulations of the university	63	34	3	100
Responsibilities of instructors	61	32	7	100
Contract and promotion of instructors	37	61	2	100
Fellowships for instructors	35	63	2	100
Availability of funds for teaching materials	45	54	1	100
Process of buying books; duplication of materials	55	43	2	100
University reform	79	19	2	100

[a]Sample numbered 112.

More than 60 percent of the instructors rate as insufficient the information on employment and promotion of instructors, and on fellowships for instructors. The majority judged the information on availability of funds for instructional materials insufficient. On the other hand, the majority of the group responded favorably to the sufficiency of information about university regulations, plans and policies of the Center, the responsibilities of instructors, and the procedure for purchasing books. Approximately four-fifths of the sampling considered the information about university reform sufficient, and only in this case did the majority from each of the seven participating Centers register a sufficient rating. In five of the eight situations given in the table the majority from Arica and from Temuco rated information sufficient; the majority from Antofagasta, Iquique, and Talca rated only four situations sufficient; the majority from

La Serena rated three sufficient (with two ties between the sufficient and insufficient ratings); and the majority from Ñuble rated only one situation sufficient (with two ties). The results indicate a review of information procedures is in order.

Similarly, it appears as if considerable improvement could be effected in the program of disseminating information to students. Students were also asked to evaluate the information on certain subjects as sufficient or insufficient. Table 15 shows that more than two-thirds of the students in the two participating Centers reported information to be insufficient in three of the selected subjects. The heavily weighted insufficient evaluations were given with reference to student loans, medical and dental services for students, and office hours of instructors for consultations with students. The majority of respondents judged sufficient the information about guidance services and library regulations. Less than one-half of the students regarded information on university reform and semestral plans of study as sufficient.

TABLE 15

Center Students' Opinions of Available Information, in Percentages[a]

Subject	Sufficient	Insufficient	No response	Total
Requirements for graduation in various carreras	39	52	9	100
Loans from the university or other sources	19	72	9	100
Guidance services	52	39	9	100
Medical and dental services	17	78	5	100
Office hours of instructors for conference with students	24	67	9	100
Regulations for use of library	56	33	11	100
Plan of studies for each semester	46	41	13	100
Objectives of university reform	46	43	11	100

[a] Sample numbered 46.

SUMMARY

As a system within the University of Chile, the Regional Colleges were responsive in their early years to the vigorous and creative leadership of Dr. Irma Sálas, director of the Department of General Studies. Obstacles to concentration upon general studies in the university setting caused a shift in emphasis to the advancement of short-term carreras which prepared graduates for middle-level careers. The DEG carried responsibility for directing and administering the Regional Colleges, with the support, collaboration, and vision of Rector Gõmez Millas until 1963. This assignment necessitated having the cooperation of the university faculties, whose approval was prerequisite for presenting proposed carreras to the Superior Council of the university. It was also essential to have dedicated colleagues, including DEG coordinators and principal staff members of the Colleges, in order to provide a good educational base for the new type of institution.

Since the forces of demand, and also of opposition, probably would not have waited, plans and decisions were made rapidly in the diverse but related areas of academic and professional studies, staff development, community relations, financing, and construction planning. The emergent growth of the Regional Colleges, largely apart from the main stream of university development, probably influenced the subsequent reaction of Rector González. Although he expressed some satisfaction with the progress of the Regional Colleges, his actions indicated concern with bringing them closer to the structure and jurisdiction of the university. Instead of recognizing and encouraging the potentialities of the Colleges for serving uniquely in Chilean higher education, he anticipated their eventual transformation into universities. The Regional Colleges, which had been transformed into centros universitarios, were made directly responsible to the rector rather than to the director of the DCCU, which replaced the DEG. Other actions of the university's Superior Council and the rector resulted in creation of the Superior Council of the University Centers, reinforced the supervisory role of the faculties, and established the DCCU mainly as a coordinating organization. Directors of the Centers, through the Superior Council of the University Centers, then had a direct line of communication to the rector.

During the 1968-1969 reform period the Centers sought the status of sedes, a large measure of autonomy, direct representation in the university's policymaking activities, and, not least of all, release from the coordinating activities of the DCCU. It was a trying period for the DCCU, one of perplexity and uncertainty. Staff members were virtually isolated from the Centers, which could not offer a receptive atmosphere. Then, at the beginning of 1969, the university authorities created the Technical Secretariate in place of the DCCU. The new agency was a consolidation of the services of the DCCU and the general secretary of the University Centers. Among its charges were those of working with the Centers and the faculties toward attaining a level consistent with that of a national university. It was also expected to conduct studies, inform university organisms about the Centers, and carry out decisions of the rector and the university's Superior Council.

Referring to the structure and organization within the individual Centers, it seems obvious that the 1965 general regulations were a milestone in the progress toward sound organization and improved performance of personnel. They provided norms and guidance on structure, definitions, positions, departments, and duties of personnel and organisms. Recently, like other parts of the university, the University Centers have striven to reorganize themselves in a manner consistent with the university reform agreements. By the end of 1969, they had, for the most part, formed normative councils, and administrative committees, established academic departments, and elected officials to serve during the transitory period until a new organic statute became effective. In these efforts the Centers tried to comply with the commitments they reached in the university's reform deliberations: participation of professors, students, and non-academic personnel in university government; fixed weighting of the participation of these respective elements in voting; election of officials and representatives to councils; academic departments as basic units in institutional operation; and authority principally through groups such as assemblies, normative councils, and administrative committees.

CHAPTER 4

THE CURRICULUM: PLANS AND TRENDS

FEATURES OF THE CURRICULUM

For many years efforts to strengthen institutions of higher education in Chile have been associated with aspirations for social and economic development. The precise contributions which were expected of universities have been debated repeatedly. Perhaps few, if any, in the Chilean scene now would deny the validity of the following statement, which has been drawn from an international development conference at Stanford University:

> The process of socioeconomic development will succeed to the degree by which the elements of productive resources, resource utilization, and sociocultural environment are activated and orchestrated. The key to this activation and orchestration is people--leaders, technicians, and workers with the proper skills and attitudes and occupational mix; without them, native physical resources, capital invested, and the growing store of production knowledge and techniques will go to naught. Education and training are required. To be efficient and effective this education and training must be planned, systematically implemented, and continuously evaluated. . . (Quirolgico, 1968, pp.174-175).

The research and writing of Irma Sálas and Egidio Orellana provided an auspicious background for the establishment of the Regional Colleges. Their efforts and those of Rector Gómez Millas and Dean Eugenio González (elected Rector in 1963) constituted major steps toward the introduction of this innovative institution. Curricular foundations were set forth to the Superior Council of the University of Chile in 1959 and 1960, and were then supplemented by Dr. Sálas when she became Director of the Department of General Studies and prepared various documents, including the Master Plan of the University Colleges.

Basic Plan of the Curriculum

Prior to the authorization of the first College, the university's Council endorsed a broad educational plan which included general studies, basic sciences, preparation for transfer to professional schools of the university, and studies in short-term occupational carreras. The central idea of the plan was that advanced professional or academic specialization required students to have a solid scientific preparation in their first years of university study. In effect, this signified the introduction of a formative period between the end of secondary school and the beginning of specialization. Graduates of the secondary schools would be able to attend the new colegios universitarios for two years (U. de Chile Instituto de Educación, 1960, pp.78-79). Upon the successful completion of their studies during this period, they would be awarded the degree of bachiller universitario, which was authorized in 1961 by the University of Chile. It was a legal equivalent of the bachiller en humanidades, which was a requisite for admission to university schools. The new degree was designed to enable Regional University College graduates to study for professional degrees in intermediate level carreras or to enter higher professional studies in the different faculties[1] of the university (U. de Chile, DEG, 1964, p.71). Actually, the two years of post-secondary studies prerequisite for the bachiller universitario signified a much higher level of educational achievement than that of secondary school graduates who passed certain examinations in order to qualify for the bachiller en humanidades.

At the outset, the plan of study coincided with Dean González' 1960 proposal. Studies were in four areas: arts and letters, social sciences, biological sciences, and physical sciences and mathematics. Approximately 70 percent of the study time during the first two years would be given to the area selected, and the remainder would be general education in the other three groupings. It was recognized that specific courses, be they for general education or for specialized interests, would vary in purpose, content, and method.

A number of circumstances led to an early modification of this curricular design. The status and potential growth of the colleges were threatened. In Santiago the deans and the faculties of the University of Chile demonstrated little, if any, interest in exploring or introducing a common program of general studies during the first two years. They believed such a change would interfere with the sequence of the professional carreras. Furthermore, most of the deans and faculties were either indifferent or resistant to the acceptance at an advanced level of transfer students who had completed two years of study in the Regional Colleges.[2] This situation precluded curricular dependence upon general studies and resulted in moves to introduce specialized programs which could be complemented by general studies.

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[1] Any reference to faculty pertains to the University of Chile at Santiago.

[2] Information from Juan Gómez Millas and Irma Sálas during individual interviews in Santiago, Feb. 17 and April 18, 1970, respectively.

Since only an individual faculty of the university had the authority to recommend new carreras to the University Superior Council, it was necessary, in introducing the first College, to propose the establishment of specializations as quickly as possible. Many of the professional staff members in the new Colleges, as well as students and people in the community, did not understand or accept the innovation which the Regional Colleges attempted to introduce in the form of a two-year general studies program. On the other hand, interest was high in the establishment of carreras whose studies would begin in the first year. Even in the early 1960s students began to follow plans of study in carreras after completing no more than one year of study in the Colleges. With the collaboration of the Faculty of Philosophy and Education in Santiago, the special two-year program for the preparation of elementary school teachers was authorized by the University Council. Teacher education therefore became a bulwark of the curriculum shortly after the establishment of the first Regional Colleges.

According to the 1964 Master Plan for the Regional University Colleges, they were ". . .organized to prepare professional men and women at the intermediate level, as well as to provide instruction in the basic sciences, and also general education" (U. de Chile, DEG, 1964, p.59). Generally, in Chile a "profession" is any occupation for which the university offers specialized preparation which leads to a degree, regardless of the duration of the period of study. The training of intermediate level professionals was planned to provide the knowledge, abilities, techniques, and skills necessary to successful performance in the respective fields of work.

Preparation in the basic sciences included courses in those subjects which were the basis for technical studies; namely, physical sciences, biological sciences, and mathematics. General education was provided partly through recommended or elective courses in the arts, letters, social sciences, philosophy, psychology, and the natural sciences. The program for general education also included courses directed toward improvement of communication skills and better achievement in studies at the university level. Courses were given in Spanish, English, and French. Instruction in orientation to the Colleges included an emphasis upon habits and techniques of study. In order to assist the individual student in development, the Colleges systematically offered group guidance, academic tutorship, and physical education (see Chapter 7). To further special interests and aptitudes, elective activities were available through student groups interested in music, drama, and other fields (U. de Chile, DEG, 1964, pp.59-60; Sálas, E., 1966, pp.3-4. Such, briefly, was the broad outline of the curriculum of the Regional Colleges in the middle 1960s. Changes have been minimal during recent years.

General Education

An important Latin American conference on education in 1966 acknowledged the significance of general education. The more complex the specialized activities of an individual are, the more difficult and demanding will be the functions that he must fulfill as a man and a citizen. Therefore, general education is essential as a part of his general development. Similarily, the more intensive general education is for the laborer and the technician, the greater will be their potentialities for facing new problems in the ever-changing technologies of their work environments. The conference recognized the significance of personal development for effective fulfillment of responsibilities in political, professional, and personal affairs. Such development, it was suggested, should incorporate social responsibility, habits of criticism and tolerance, interest in cultural values, and a spirit of initiative and adaptation to new ideas and methods (UNESCO, 1966a, pp.38-39).

Evaluation of curricula in the Regional Colleges has not been sufficiently intensive to warrant asserting here that the general education program has been successful in achieving these goals. Nevertheless, it is noteworthy within the professionalistic tradition of Chilean higher education that the Regional Colleges have upheld general education as an integral part of their total curriculum.

A recent publication of the DCCU shows a continuing commitment to general education as a basic feature of higher education. The department observes that general education includes the knowledges, abilities, skills, and attitudes that all persons must have in order to be effective as responsible citizens of a democratic society. Acknowledging that general education is really a continuous process, the department states:

> It has been traditional policy in our country to believe that general education should end in secondary school. Our university schools are, generally, specialized professional schools. They suppose that the secondary school graduate has acquired humanistic and scientific culture sufficient to enable him to dedicate himself exclusively to his professional preparation in the university. We know very well, nevertheless, that the general education that students get in elementary and secondary schools is insufficient and incomplete. The advance of sciences and technology, the literary, historical, sociological and economic research, the extent and complexity of the domains of art, are increasingly great. For the better comprehension and

> appreciation of the principal knowledges, theories and laws accumulated from the past and increasing in the present at a giddy pace, students must have greater maturity than that which they have in the elementary and secondary schools. This argument alone explains the necessity of continuing to offer general education in the university (U. de Chile, DCCU, 1968d, pp14-15).

The coordinating department presents the following objectives of general education: to develop the ability to express ideas clearly and precisely, both orally and in writing; to read and listen with understanding; to use the basic mathematical operations effectively; to understand the cultural heritage in order to obtain a clear perspective of the present epoch; to understand the relation that exists between every-day life and the biological and physical setting, so that adaptation and improvement will be possible; to use the scientific method in the solution of problems; to develop an aggregate of ethical and spiritual standards; to develop a clear and precise concept of rights and duties of responsible citizens in a democratic society; to develop physical and mental health appropriate for the individual, his family, and the community; to develop the capacity for personal, vocational, and social adaptation; to develop skills necessary for participation in some form of creative activity; to develop the capacity for appreciating creative activities of others; and to develop knowledge and appreciation of the national plans for social and economic development and the responsibility of each citizen for contributing to its success (U. de Chile, DCCU, 1968d, pp.15-16).

A common pattern of general education requirements and electives prevails throughout the eight Regional Centers.[3] An attempt to satisfy the objectives of general education is provided through instrumental and systematic courses. Courses instrumentales are designed to develop ability in oral and written communication, both in Spanish and in English or French. The course, Introduction to University Studies, is also in the instrumental classification. Systematic courses in general education are in the areas of arts and letters, philosophy and psychology, social sciences, and natural sciences. Detailed specifications for general education vary with individual carreras, but the model tends to be the same wherever a specific carrera is offered. These conditions reflect the general sponsorship of carreras by faculties, the coordinating activities of the DEG and the DCCU, and, more recently, the STCU, and the participation of Center instructors in the planning and review of curricular patterns.

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[3] In this and subsequent sections presenting details about carrera patterns, much of the data have been drawn from the following sources: U. de Chile, DCCU, 1966c, pp.26-143; U. de Chile Oficina de Informaciones Generales, 1966, pp.361-628; U. de Chile Secretaría Tecnica Sedes Universitarias, 1970.

Among the two- and three-year carreras the general education pattern tends to be concentrated in the first two or three semesters, during which considerable emphasis is placed upon Spanish and English. With few exceptions, the two- and three-year carreras include a total of 12 hours (one hour of classroom or laboratory session weekly during a semester) of study in these two languages. The Introduction to University Studies is a laboratory course, two hours each semester during the first year of study. Usually given by a professional guidance worker, the course presents training in study techniques, discussion of common problems, use of diagnostic tests, and some group guidance.

The pattern of general education for each carrera depends upon the specialization itself, the duration of the carrera, and the needs of students as perceived by the program planners. The acceptable general education courses vary slightly for individual carreras, but a student usually selects from the following one-semester courses:

Arts and Letters

- Dramatic art
- Introduction to the study of art
- Introduction to the study of music
- Introduction to the study of literature

Philosophy and Psychology

- General psychology
- Human relations
- Introduction to philosophy

Social sciences

- Problems of the contemporary culture
- Problems of the contemporary society
- General sociology
- Introduction to anthropology
- Introduction to economics
- Introduction to political science
- Political geography in the contemporary world
- Natural and human resources of the country
- Regional geography
- Economics of Chile in the present period

Natural sciences

Courses in biology, chemistry, mathematics, and physics serve both as general education and as professional or technical subjects in individual specializations. In some programs one or two of the listed general education courses are required or recommended. Many of the carreras specify a total of 12 to 16 hours of electives from a list similar to that above. It is usually recommended that students take general education courses in different subject areas. In general, the total pattern of general education in the two- and three-year carreras, including courses in Spanish and English, constitutes the equivalent of more than a full semester of study. Requirements and electives are distributed between 16 or 20 hours of classes and 12 or more hours of laboratories or workshops; the average total number of hours of all scheduled studies per semester ranges from approximately 25 to 34 per week. Classes may be lecture or lecture-discussion courses, usually emphasizing theory.

Carreras four and five years long are necessarily parallel to those offered by the sponsoring faculties in the university at Santiago, and the patterns of general education, if any, differ considerably from those followed in the short carreras of the University Centers. For example, the carrera in nursing offers considerable breadth in language, psychology, philosophy, and sociology; carreras in secondary school teaching tend to include only courses in the subject specialty and in professionally related areas.

Keeping in mind the general education objectives in the Regional Centers, it would be opportune in the immediate future to evaluate the results of this part of the curriculum. Some of the objectives may be achieved in the basic science courses and the professional subjects of the curriculum, but it would be useful to know to what extent students in the Regional Centers actually do study the arts and the social sciences, or participate in supervised extra-class activities related to the general education objectives.

At this time in Chile it is especially difficult to consider rationally the proportionate importance of the social sciences to a student's development. During the past few years considerable progress has been made in the social sciences in Chilean universities. Some specialists in Chile, as elsewhere, hold that Marxist concepts are the nucleus of the social sciences. Those social scientists who subscribe to the principle of open inquiry could hardly engage in general education teaching in the same manner as those who abide by a certain doctrine. Concern for indoctrination in a given ideology, be it oriented toward Marxism or capitalism, may preclude from curriculum development an objective analysis of general education in the Regional Centers. This situation may partially explain the limited staff development in the social sciences in these institutions.

Regardless of specializations, it appears to some Chileans that the preparation of university professors in the social sciences has been unrelated to the role which these fields have in the development of the country (Almeyda, 1969, p.16). Without having adequate instruction in the social sciences, how can maturing students at the regional campuses understand their own role in Chilean society, the needs and problems of their regions, the features and obstacles in Chile's socioeconomic development, the accommodations of multi-party politics, and the pressures for social change?

Basic Sciences

Studies in the basic sciences are complementary features of the general education program. As such, they reflect appreciation of science and technology as major factors in contemporary living and in social and economic change. They also provide the foundation for specialization in various carreras. Physics, chemistry, biology, and mathematics comprise a separate category in the total curriculum, reflecting the widely acknowledged weight of the sciences and technologies in the students' professional preparation. In existing carreras, the depth of attention to the basic sciences varies with the closeness of the carrera's relationship to technological and scientific development. For example, training in chemistry technology has 47 hours of required study in the sciences, excluding advanced study in chemistry. On the other hand, carreras such as those in library science and applied arts do not include any courses in the basic sciences. The median science requirement for the two- and three-year carreras is six hours of classes and nine hours of laboratories. Among the parallel carreras, nursing emphasizes the basic sciences, while social work and teaching (except for specialization in the sciences) give little attention to them. A few carreras, specifically nursing and social work, extend the cloak of basic sciences to include courses in sociology, psychology, anthropology, and philosophy. One may speculate whether the limited development of science-oriented carreras at the University Centers resulted from a policy of avoiding duplication of functions of the State Technical University.

Organization of the Centers as unified educational enterprises has been an advantage in the development of the basic sciences. Unlike the situation which still prevails in most Latin American institutions, a single staff of science teachers in the Regional Centers teaches students in all carreras. Subjects may be adapted to the requirements of individual professions. Students from various carreras benefit from observing and communicating with those in other specializations, while appreciating the significance of the sciences as a common underpinning for training in a large number of occupations.

Instructors, too, may better utilize their abilities by reaching heterogeneous groups of men and women students in a variety of carreras. Intra-institutional communication and planning also is facilitated by regular contacts between instructors in the sciences and those in the individual carreras, and duplication of staff and facilities in the respective carreras is also avoided.

Basis for the Intermediate-Level Carreras

Recognition of the importance of the short carreras in post-secondary institutions was given in the previously mentioned Latin American conference on education.

> The transition from the secondary school to the university is not easy owing on one hand to the selection tests that generally are required for admission to the university, and on the other hand, to the limitations of human and material resources of the institutions of higher education. Although the selection criteria for the attainment of higher studies are justified, there arises the problems of an important number of secondary school graduates, who, after many years of study, find themselves without a specialized preparation that equips them for fruitful participation, without frustrations, in the world of work. To this group is added the number, also considerable, of those having the intellectual capacity for pursuing higher studies but lacking the economic possibilities for doing so, even supposing that they obtain scholarships, for they have to contribute to the support of their families. This gives rise to a partial waste, but very important one, of family and governmental efforts and of years of study by thousands of youths who could find an effective palliative in the introduction of short programs that would remedy the problem so many times repeated of the insufficient number of technical personnel auxiliary to the professional of a higher level (UNESCO, 1966a, p.37).

Writing of the persisting pressure to upgrade, strengthen, and improve the professions, Professor Frederick Mosher comments on the development of sub-professions, which as supporting occupations perform the essential work which lies below the threshold of a higher professional performance. His statement is as suitable for a developing country like Chile as it is for one in an advanced stage of economic development.

> As demands for services in the varied professional fields rise, and as the supply of fully accredited professionals is restricted by ever-rising standards and qualifications,

> others must be found and trained to perform the tasks of lesser difficulty which do not require the high skills and knowledge of the true professional. And soon the sub-professions are on **the 'upgrading' track** themselves, seeking recognition as true professionals. Thus the doctors delegated to the nurses, and the nurses after gaining the standing of a profession, delegated to practical nurses and nursing aides. The engineers and architects have their technicians, surveyors, draftsmen (and others), the accountants their bookkeepers, the lawyers their clerks, the dentists their dental technicians, and the Foreign Service officers the Foreign Service staff (Mosher, 1968, p.31).

The rationale for the introduction of intermediate-level career programs was well stated in an announcement made by the Department of General Studies in 1962:

> The rapid development of science and technology in our time has resulted in the appearance of new occupational fields, and therefore the need for special and technically prepared persons to function in these fields.
>
> At present the University of Chile prepares a professional of high specialization and ample knowledge, whose training lasts from five to eight years and is based upon a vast scientific education. These professionals of advanced training are dedicated generally to research in pure science, to planning, direction, and control of works appropriate to their specialty.
>
> On the other hand our country has vocational schools of secondary level that prepare the skilled worker, whose work requires especially manual ability.
>
> It is understood, then, the necessity of having a professional of intermediate level, who having fundamental knowledge of the sciences and the ability and manual skill that each course of study requires, serves as a link between the professionals of high level and the specialized workers; in other words, a technician who speaks the same scientific language of his superiors and at the same time can teach and direct workers (U. de Chile, DEG, 1962a, p.1).

The same document contained plans of study for 12 two- to three-year carreras, which the department presented as offerings of the colegios regionales. These carreras were designed to prepare students for the following positions:

Industrial technician (*tecnólogo industrial*)
Drafting technician (*dibujante técnico*)
Agricultural technician (*tecnólogo agrícola*)
Livestock technician (*tecnólogo en ganadería*)
Chemical technician (*tecnólogo químico*)
Home counselor (*orientadoras del hogar*)
Auxiliary social worker (*auxiliar de servicio social*)
Administrative technician (*tecnólogo en administración*)
Secretarial technician (*secretario técnico*)
Interior decorator (*decorador de interiores*)
Commercial artist (*dibujante publicitario*)
Librarian (*bibliotecario*)

Eight of these programs are still offered in the University Centers, although details of the study plans have been modified during the interim period. The remaining four were discontinued by the mid-1960s. Eventually, the preparation of secretaries was judged not to be a suitable project for the Regional Colleges; specialized commercial schools are available for this training. Vestiges of the other three carreras which were eliminated (industrial technology, interior decoration, and commercial art) have survived in new specializations such as electronics, food technology, and applied art. Most specializations of this type were new to Chilean education at any level; it was essential to announce programs that would attract students and, simultaneously, to search for teachers who were competent, as well as responsive to this educational innovation.

Some of the listed occupations are allied to established professions: e.g., the administrative technician is occupationally related to the commercial engineer, whose university degree certifies the completion of studies such as those in business administration. The agricultural technician, similarly, is affiliated with the agronomist, the auxiliary social worker with the professional social worker, and the chemical technician with the chemist.

Early Development of Carreras

Due attention was given to the probable future demand for middle-level professionals, and it was necessary to move rapidly in order to forestall any organized opposition to the Regional Colleges within the University of Chile. Apathy and indifference perhaps were most important in offsetting potential resistance among the forces of traditional higher education. In the early 1960s little was known about Chile's projected manpower requirements in established and newly developing occupations. Seeking guidance for the purpose of curriculum planning, the Department of General Studies contracted with the Institute of Organization and Administration, of the Faculty of Economic Sciences (Instituto de Organización y Administración, Facultad de Ciencias Económicas--INSORA) of the University of Chile to study manpower needs in selected regions. With the cooperation of the Ford Foundation and the University of California, DEG also obtained several special consultants to advise on the development of occupational carreras and the program in basic sciences. The ten-year national program of economic development, which CORFO (Corporación de Fomento de la Producción) prepared, projected economic activities that would be initiated or extended in various parts of the country. Data about the use of human and material resources in Chile were found in the 1956 Industrial Census, the Third National Census of Manufactures, the Third National Census of Livestock, and the studies of employment and unemployment by the Institute of Economics at the University of Chile. Staff members of the DEG visited various localities in order to confer with officials of chambers of commerce, regional offices of CORFO, the National Bank of Chile, professional associations, the National Health Service, business and agricultural organizations, educational institutions, and municipal and provincial governments. These consultations brought information about the possibility of employment in specific fields, the relations which newly trained professionals would have with personnel and employers in the community, and the social and professional acceptance that graduates of the Colleges would probably experience (U. de Chile, DEG, 1963b). The outcome of these inquiries, which were the basis of analysis by DEG and the staffs of the new Colleges, was the evolving curricular plan for carreras.

The Master Plan of the Regional Colleges states, "The planning of intermediate-level careers to be offered in the colleges presupposes the existence of studies on human resources at the national and regional levels." (U. de Chile, DEG, 1964, p.60) When the Master Plan was prepared in 1964, INSORA had completed studies of human resources at the higher professional level in medicine, architecture, dietetics, and engineering (U. de Chile, INSORA, 1962; 1964). The DEG used these studies and others, including Doris Krebs' (Krebs, 1961; Krebs and Rogan, 1962) analyses of nursing needs and resources in Chile and the more general study by Platt, Loeb, and Davis (1964). INSORA's two studies of the regional needs of the Temuco, La Serena, and Antofagasta zones were judged to be especially useful in determining the intermediate-level carreras which the Colleges offered in those areas. Subsequently, the DEG obtained from CORFO a preliminary study of regional needs for intermediate-level manpower in five regions of

Chile (CORFO, 1964). The department also conferred with officials of international and national institutions, as well as of governmental and private agencies, concerning the training of professionals at the intermediate level (U. de Chile, DEG, 1964, pp.61-63).

By 1964 the three functioning Regional Centers provided preparation in 11 two- to three-year carreras. Listings closely resembled the group of offerings two years earlier. Studies of statistics and of cooperatives had been planned and introduced for later incorporation as specialties of the carrera in administration, and a new carrera in building technology had been organized. At this point seven faculties of the university were collaborating with the Colleges by sponsoring carreras appropriate to their respective jurisdictions in agronomy, architecture, chemistry and pharmacy, economics, law, medicine, and philosophy and education.

During the first half of the 1960s, DEG, together with the staffs of the Regional Colleges, made a sustained attempt to ascertain regional and national needs for professional manpower at the intermediate level. Occupations in this category were dimly defined, and reliable data were scarce. Risks were considerable in determining which intermediate-level carreras to offer, but educational objectives and potential contributions of future graduates were deemed of prevailing importance. The pioneering Chilean educators in the Regional College program deserve admiration and respect for their initiative and selectivity.

The procedure for introducing short carreras, the only type which could be completed in the Colleges up to 1965, was first to have consultations among DEG staff members, representatives of the appropriate faculty, and administrators and instructors from the Regional Colleges. Second, a provisional plan of study was introduced in one or more of the Centers, and, following a review by the faculty representative and further consultation if necessary, the carrera was then considered for approval or disapproval by the faculty. If the carrera and professional degree was approved, it then could be authorized by the University Superior Council. Accordingly, the degree of professor primario was authorized in 1961; in 1963, final approval was given to carreras in home guidance and in administration. At least 6 of the 11 carreras which the Colleges were offering the following year still were being considered by faculties. Prolonged deliberation or delays in approving carreras were, to some extent, to be expected in an academic setting, but they doubtlessly added to the worries of those in the Regional Centers. Additional carreras were not formally approved until 1965. During 1965-1967, a cluster of specializations were authorized, probably reflecting the more secure status of the Colleges after they were transformed into Centros universitarios.

Transfer Policies

The policy of the Regional Centers is to arrange for student transfers to another Center, when necessary, so that a student who begins a carrera has reasonable assurance of being able to complete it. Although procedures are not always regularized, students who are in good standing seem to have little difficulty in transferring from one Center to another, as long as they remain in the same carrera.

One of the original functions of the Regional Colleges was to prepare students for transfer to the faculties and schools of the university. The plan of general studies, as conceived for the Regional Colleges, did not coincide with the carrera requirements of faculties in the university; transfer to a faculty or professional school after two years of study could be effected only with the approval of the faculty concerned. In some cases students took parallel courses in the Centers and the remainder of the carrera in Santiago. Thus, transfer to a faculty often prolonged considerably the period of university study.

By 1964 transfer opportunities existed in the Faculties of Philosophy and Education, Fine Arts, Medicine, and Legal and Social Sciences (U. de Chile, DEG, 1964, pp.66-70). Agreements between these faculties and individual Regional Colleges were arranged through the DEG's coordinating services. At Temuco and La Serena qualified students were able to complete the first two years of the carrera for the preparation of secondary school teachers in Spanish, English, French, history and geography, mathematics, and biology. The students then studied the three remaining years of their five-year program in the Faculty of Philosophy and Education at Santiago. Likewise, the College at La Serena offered two years of the program for the preparation of secondary school teachers in plastic arts. Students who completed this specialization then transferred to the third year of study in the same carrera at the Faculty of Fine Arts. Similar arrangements were available in nursing and in obstetrics, so that students could transfer to the corresponding schools in the Faculty of Medicine. By agreement with the Southern University and the National Health Service, the College at Temuco offered the first two years of the carrera in nursing, with students transferring to Southern University for the third year of study. A similar plan was effected for students preparing to be secondary school teachers.

In spite of the headway which was made toward facilitating transfers during the first four years of Regional College activities, the way had not been easy. Faculties and schools were accustomed to admitting students to the first year of study; transfer students were rare. The change of the Regional Colleges to centros universitarios tended to reduce local interest in transfer arrangements, for the Centers then could aspire to offer carreras with a duration of four or more years. Transfer carreras, which could be completed only by transferring to another campus, nearly disappeared in 1968 when the Centers were included in the universitywide program of admissions (see Chapter 7). By 1969, however, a few transfer carreras still existed. For example, students in the civil construction technology carrera could complete only the first year of study at the Osorno Center. Thereafter it was necessary to transfer to the School of Engineering in the Faculty of Physical Sciences and Mathematics in order to complete the program. Similarly, at Iquique, students who completed two years of preparation for secondary school teaching could transfer to the Antofagasta Center in order to complete the five-year program.

Perhaps more than ever before, the need exists to facilitate the transfer of students from one campus to another, especially to the university in Santiago. A transfer system would be advantageous for students and would be conducive to less duplication of programs as well as better utilization of resources.

Recent Development of Carreras

At the opening of the academic year in March 1969, the eight University Centers offered 34 complete carreras.[4] This was 23 more than were available five years before. Eleven of these included subject concentrations for the preparation of secondary school teachers. New carreras were: public administration, medical administration assistance, nutrition and dietetics, obstetrics, nursing, social work, public health technology, civil construction technology, electronics, design, library science, nursery school teaching, and secondary school teaching, with specializations in manual arts, plastic arts, biology, Spanish, integral design, musical education, English, mathematics, chemistry, physics, and history.

Additional flexibility, including responsiveness to the lack of employment opportunities for graduates, was shown by curtailment or adaptations of the curriculums of the Centers. For example, the special two-year carrera in primary teaching finally had been displaced entirely in all Centers by the regular three-year program for the preparation of elementary school teachers. This carrera included specializations in Spanish, English, natural sciences, social sciences, mathematics, and physical education. At Antofagasta and Temuco it was decided to terminate the program for preparing librarians at the end of 1969. Oddly enough, in spite of these actions, the Ñuble Center was authorized in the same year to introduce the same carrera. Although graduates in social work assistance then could receive a university degree rather than the less satisfactory diploma of earlier years, the carrera was still scheduled for termination at the end of 1969.

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[4] A five-year parallel carrera to prepare craftsmen (artífices) was scheduled to be introduced in 1970 at Antofagasta and Arica. A three-year carrera in public accounting was to begin at Arica and Iquique. (U. de Chile, Secretaría Técnica de Sedes Universitarias, 1970, pp.37, 65).

Among the newer carreras, public health technology at Temuco was closed to new students; the last contingent in this carrera was scheduled for graduation in 1970. The new carrera in integral design, as a specialization in the preparation of secondary school teachers, also was to be discontinued. Much of the analysis preliminary to this type of decision has been done in the individual Centers, usually in consultation with the DCCU or its successor, the STCU. The final decision is taken by the Superior Council of the University Centers. To assist the Council in deciding upon such modification for 1969, the DCCU presented a report on employment opportunities and problems in several fields of interest to the Centers (U. de Chile, DCCU, 1969).

The continuity and maintenance of the carreras are affected by student demand and budgetary allocations, as well as employment for graduates. A first-year course of study is expected to have a minimum enrollment of 25 students, and enrollments in the day and the evening carreras are mutually exclusive. In some Centers one or two carreras are offered both in the day and the evening, but owing to budgetary limitations, evening programs generally tend to be restricted. If mixing the younger day students with the adult employed group in the evening were feasible, some occasional economies and educational benefits might result.

Required courses in each carrera are scheduled and taken by students in semester and yearly blocks. This scheduling permits a Center to suspend offering one or more years of a carrera in a given academic year. For example, it may be decided not to offer the second-year courses of a carrera, a technique judged necessary in order to operate within current budgets. Admittedly, such actions cause hardship to those who expect to advance to the year of work not being offered, or to repeat that year because of scholarship difficulties. During 1969 every Center made one or more adjustments of this kind in its scheduling. These actions have aroused objections from instructors (Hernández, 1969, p.10), and comments of residents in the Centers' communities indicate some criticism of this practice. The Centers could probably do more to secure community understanding of the reasons necessary for such decisions.

In the sedes of the provinces, in 1970, 13 short carreras (created especially by and for the Regional Centers) were available to students that the University in Santiago did not offer.[5] Two years earlier, the University Centers of the provinces had more than twice the number of students enrolled in short carreras than the University in Santiago. The latter had 2,519 students in this category, the University at Valparaíso 434 students, and the eight Centers 5,776 students (U. de Chile, Oficina de Planificación, 1969b, p.405). The short carreras all were planned to prepare students for intermediate-level professional careers, and some are now offered in Santiago, where faculties use the same courses of study as the University Centers. The specializations there include construction technology, electronics, drafting, library science, obstetrics, elementary school teaching, and administration, with emphasis on sales and on cooperatives.

TRENDS AND ANALYSIS OF ENROLLMENT IN CARRERAS

In 1969, the Centers registered enrollments in 34 different carreras.[6] A few of these, as already stated, were scheduled for discontinuance or consolidation at the end of the year. Table 16 shows that the number of carreras having enrollments in the eight Centers ranged from 6 in Iquique to 21 at La Serena and at Temuco. The choices available to students vary considerably among the Centers. The concentration of carreras in the various Centers may have considerable use as one criterion for future curriculum development. Duplication of carreras could be warranted if student demand and employment opportunities, together with available resources, are sufficient to support it. Duplication of carreras also widens the geographical choice for students who may have mobility as a result of family ties in several locations.

Table 17 presents, in the order of frequency, the carreras which the University Centers offered in 1969, the duration of each program, and the number of Centers which had student enrollments in

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[5] STCU data supplied July 13, 1970; see also U. de Chile Instituto de Investigaciones Estadísticas, 1969, pp.15-17.

[6] This total excludes double-counting of the same carreras which are offered separately in the day and in the evening.

TABLE 16

Carreras Registering Enrollments in University Centers, 1969

Center	Number of Carreras
Arica	10
Iquique	6
Antofagasta	18
La Serena	21
Talca	17
Ñuble	14
Temuco	21
Osorno	13

Source: U. de Chile, STCU, Boletín Informativo, Año 4, No. 6, Mayo de 1970, p.26.

the specified carreras. Fifteen carreras were offered by four or more of the eight Centers. Two were given in all Centers, elementary school teaching and secondary school teaching in mathematics. Seven campuses provided specializations in home guidance and secondary school teaching of English. In general, carreras offered in several branches are distributed geographically among Centers north and south of Santiago; 11 carreras were scheduled in only one or two localities.

Classification of Carreras

For clarity, the carreras have been classified under four headings: agriculture and rural development; administration, technology, and applied arts; health services; and education (Table 18). The data indicate considerable distribution of enrollment among the four classifications, which reflect major aspects of social reform and economic development in Chile. The principal defect of the carrera pattern is the absence, except for electronics, of technical specializations which are related to engineering. Assuming support is forthcoming from the university's school of engineering, cooperative programs might be developed in collaboration with campuses of the State Technical University and with the University of the North. Although the distribution of enrollment in the University Centers does not necessarily correlate with any conceptions of national priorities regarding sectorial development, the data do demonstrate that attention has been given to agriculture, business and industry, health services, and education. It is not evident that the important areas such as mining and transportation have received

TABLE 17

Centers Offering Carreras, 1969

Carrera (in order of frequency)	Duration of Carrera (in years)	No. of Centers
Elementary school teaching	3	8
Secondary school teaching, mathematics	5	8
Home guidance	3	7
Secondary school teaching, English	5	7
Administration	3	6
Agricultural technology	2.5	6
Secondary school teaching, biology	5	6
Applied arts	3	4
Drafting technology	2	4
Medical technology	4	4
Nursery school teaching	3	4
Nursing	4	4
Nutrition and dietetics	3	4
Secondary school teaching, plastic arts	5	4
Social work	4	4
Chemistry technology	3	3
Food technology	3	3
Library science	3	3
Obstetrics	3	3
Public administration	3	3
Secondary school teaching:		
Chemistry	5	3
Physics	5	3
Spanish	5	3
Civil construction technology	3	2
Construction technology	2	2
Secondary school teaching, music	4	2
Social work assistance	2.5	2
Design	5	1
Electronics	2	1
Medical administration assistance	2	1
Public health technology	2	1
Secondary school teaching:		
Manual arts	5	1
Integral design	5	1
History, geography, and civic education	5	1

Source: U. de Chile, STCU, *Boletín Informativo*, Año 4, Nos. 5 and 6, Septiembre de 1969 and Mayo de 1970.

TABLE 18

Classification and Enrollment of Carreras
in Centers, 1969

Classification and Carrera	Enrollment	
	Number	Percentage
Agriculture and rural development		
Agricultural technology	708	7.6
Home guidance	474	5.1
Totals	1,182	12.7
Administration, technology and applied arts		
Administration	721	7.7
Public administration	293	3.1
Construction technology	48	0.5
Civil construction technology	67	0.7
Drafting technology	284	3.0
Chemistry technology	289	3.1
Food technology	164	1.8
Electronics	112	1.2
Design	30	0.3
Applied arts	188	2.0
Totals	2,196	23.4
Health services		
Nursing	491	5.3
Nutrition and dietetics	326	3.5
Obstetrics	167	1.8
Medical administration assistance	37	0.4
Medical technology	216	2.3
Public health technology	38	0.4
Social work assistance	13	0.1
Social work	541	5.8
Totals	1,829	19.6
Education		
Elementary school teaching	1,537	16.4
Nursery school teaching	260	2.8
Secondary school teaching, all specializations	2,226	23.8
Manual arts	5	0.1
Plastic arts	171	1.8
Integral design	17	0.2
Music	85	0.9
English	674	7.2
Spanish	139	1.5
History, geography, and civic education	24	0.3
Biology	530	5.7
Chemistry	98	1.0
Physics	70	0.7
Library science	89	1.0
Totals	4,112	44.0
Unclassified[a]	26	0.3
Totals, all carreras	9,345	100.0

Source: U. de Chile, STCU.
Calculations by author.

[a] Includes 26 artesanos which the Antofagasta Center reported but which were not classified in specific carreras.

adequate consideration, but criticism is not warranted unless need for specialized manpower exists or is imminent in these areas.

Teaching carreras comprise a significant concentration of enrollment: 43 percent of the Centers' students were preparing to be teachers in nursery school, elementary school, or secondary school. Nearly one-fourth of all students were in one of the specialized carreras of secondary school teaching. Within this field, student interest in terms of registration was highest in the specializations of English, biology, and mathematics, respectively.

Within the health services, attracting nearly one-fifth of the students, the heavier enrollments were in social work, nursing, and nutrition. Medical technology and obstetrics both had substantial registrations. Considerable dispersion was evident in the category of administration, technology, and applied arts. Nearly half of the enrollment in this group was in the two administration carreras. Substantial interest also was shown in chemistry technology, drafting, applied arts, and food technology. In the category of agriculture and rural development, the programs in agricultural technology and home guidance attracted approximately one-eighth of all the students in the Centers. A considerable number of the specializations had comparatively low enrollments. Thirteen carreras each were credited with fewer than 100 students. Several of these (social work assistance, public health technology, library science, and construction technology) were being discontinued or curtailed. An additional number, including chemistry and physics for secondary school teaching, were relatively new. In a few instances, including the specializations in chemistry, physics, and music, present resources in the Centers would hardly warrant more growth at this time.

Continuity of Carreras

In 1969, approximately three-fourths of the total enrollment in the Centers was concentrated in 12 of the 34 carreras. All carreras in this group (see Table 19) were offered in three or more of the Regional Centers. An analysis of the enrollments in the respective years of these carreras should suggest their relative stability and the student attrition rate. A judgment with respect to attrition, however, must be tempered by an allowance for the growth in the enrollment of the Centers and shifts of students toward or away from individual carreras. First-year enrollments reflect this growth and therefore are likely to be relatively high, regardless of retention rates (see Chapter 7).

In view of the brief experience which the majority of the Centers have had with their carreras, the stability and continuity of these high-enrollment carreras are impressive. These elements are indicated in Table 19 by the mean year-of-study enrollments in carreras, which ranged from 21 in home guidance to 114 in elementary school teaching in the first year of study. In the second-year work, mean enrollments were lower in the large majority of the carreras, extending from a minimum of 13 in secondary school teaching, specialization in mathematics, to 83 in elementary school teaching. Increased means in the second year of study probably were the result of a high rate of repetition in the specific year and program. In the majority of the selected carreras, the third-year average enrollments were below those in the second year of study.

TABLE 19

Means and Ranges, Center Enrollments, by Selected Carreras, 1969

Carreras, in order of total enrollment	First Year			Second Year			Third Year			Fourth Year		
	Mean	High	Low	Mean	High	Low	Mean	High	Low	Mean	High	Low
Elementary teaching	114	218	35	83	148	40	55	98	24			
Administration	55	92	40	47	73	29	39	62	23			
Agricultural technology	37	43	25	35	59	16	46	95	31			
Secondary school teaching, English[a]	39	65	23	25	34	17	17	32	10	27	88	12
Social work	40	46	30	31	37	25	30	38	26	34	68	18
Secondary school teaching, biology[a]	43	61	29	24	32	9	18	22	13	13	23	7
Nursing	39	49	33	50	60	35	18	28	15	20	24	16
Home guidance	21	25	14	27	51	10	31	54	13			
Secondary school teaching, mathematics[a]	28	49	19	13	20	9	10	14	6	8	10	3
Nutrition and dietetics	30	39	22	21	30	—	24	33	10			
Public administration	36	39	33	24	31	16	25	42	7			
Chemistry technology	34	46	25	33	48	21	29	44	17			

Source: U. de Chile, STCU, *Boletín Informativo*, Año 4, Nos. 5 and 6.
Calculations by author.

[a] Fifth year enrollments were registered for secondary school teaching, the only five-year carrera in the Centers. Average enrollments for the three specializations, in the fifth year, ranged from 7 to 14 students; the highest from 9 to 20, the lowest from 5 to 10 students.

Examination of the maximum year-of-study enrollments of individual Centers offering the respective carreras indicates that multiple sections of the same courses are, or should be, given in some programs. This is pertinent to elementary school teaching, nursing, home guidance, chemistry technology, and specializations in secondary school teaching. The low-enrollment data in nearly all cases appear adequate as a basis for allocating resources to support the continuance of the specified carreras in one or more of the University Centers. Criteria for reaching such a decision, however, should include employment opportunities for graduates, student demand, relationship of specialization to regional needs, availability of suitable instructors and faculties, and relative importance of alternative use of funds which are expended on a given carrera.

Aside from students' dropping out or transferring occasionally to other carreras or insitutions, the type of enrollment data in Table 19 would reflect a number of influences over a period of years. These include shifts in employment opportunities within individual occupations, the repetition of a year's work by students who have had academic difficulties, and the greater dispersion of enrollments as more carreras are added to the curriculum.

Short and Long Carreras

Current emphasis of the University Centers may be seen by studying the distribution of carrera enrollments classified by the length of the individual programs. Scrutinizing enrollment distribution between the short and the long carreras assists in interpreting curricular trends and the extent to which the branches in the provinces are adhering to their original function of preparing students for emerging middle-level professions. Reference to the individual Centers also may show whether or not divergent tendencies are apparent among them. Table 20 presents 1969 enrollments for the 19 short carreras in the respective Centers; totals range from 1,482 students at Temuco to 130 at Iquique. While carreras with total enrollments less than 100 have been scheduled for termination, curtailment, or modification, the one exception is medical administration assistance, a new carrera offered only at Talca.

Table 21 presents enrollment in the long-term carreras of the respective Centers; the total figure of 3,504 is substantially below that of 5,815 for the short-term carreras. Two of the Centers--La Serena and Antofagasta--each had more than 20 percent of the total enrollment of all Centers in long carreras. Temuco's and Talca's enrollments were only slightly below that level; the other Centers were well below that figure. Of 15 long carreras, 11 were specializations in secondary school teaching. As a result of an agreement with the Ministry of Education, specializations in manual arts and in plastic arts have been introduced in the preparation of secondary school teachers. Now, employment opportunities in these areas are lacking because curricular plans shifted away from these fields in the program of secondary school reform.

It is desirable in Chile that projected employment opportunities for graduates, rather than mere growth of enrollment, be a fundamental criterion for guiding the expansion of individual carreras. Present

TABLE 20

Center Enrollments in Short Carreras, 1969

Short-term carreras	Arica	Iquique	Antofagasta	La Serena	Talca	Ñuble	Temuco	Osorno	Totals
Four semesters									
Construction technology					31			17	48
Drafting technology			88	58	72		66		284
Public health technology							38		38
Medical assistance					37				37
Electronics							112		112
Five semesters									
Social work assistance				2				11	13
Agricultural technology	82			89	140	111	197	89	708
Three years									
Administration	188	51		115	156	76	135		721
Public administration			101			78		114	293
Chemistry technology	69			82			138		289
Food technology			32	107				25	164
Civil construction technology (one year only)				25				42	67
Applied arts					72	44	65	7	188
Nutrition and dietetics			77		93	78	78		326
Obstetrics			69		26		72		167
Home guidance	65	39		80	86	62	105	37	474
Elementary school teaching	102	40	301	85	152	365	362	130	1,537
Nursery school teaching	71		79	30			80		260
Library science			20			35	34		89
Totals	577	130	767	673	865	849	1,482	472	5,815

Source: U. de Chile, STCU.

TABLE 21

Center Enrollments in Long Carreras, 1969

Long-term carreras	Arica	Iquique	Antofagasta	La Serena	Talca	Ñuble	Temuco	Osorno	Totals
Four years									
Medical technology	20		52	62	82				216
Nursing			108	116	106		161		491
Secondary school teaching, Music					58	27			85
Social work			135	115	118		173		541
Five years									
Design						30			30
Secondary school teaching:									
Manual arts			5						5
Plastic arts			23	80		20		48	171
Integral design						17			17
English	74	40	126	138	114	86	96		674
Spanish	70			26			43		139
History, geography, and civic education				24					24
Biology		38	140	109	92		120	31	530
Chemistry			52	24			22		98
Physics			33	13			24		70
Mathematics	63	42	54	67	84	32	47	24	413
Totals	227	120	728	774	654	212	686	103	3,504

Source: U. de Chile, STCU.

TABLE 22

Distribution of Centers' Total Enrollment
by Duration of Carreras, 1969

Carreras	Enrollment			
	Duration		Group	
	(N)	(%)	(N)	(%)
Short carreras			5,815	62.2
Two years	519	5.5		
Five semesters	721	7.7		
Three years	4,575	49.0		
Long carreras			3,504	37.5
Four years	1,333	14.3		
Five years	2,171	23.2		
Total enrollment in carreras	9,319	99.7	9,319	99.7
Unclassified	26	.3	26	.3
Totals	9,345	100.0	9,345	100.0

Source: U. de Chile, STCU.
Calculations by author.

resources of the university, or the nation, cannot justify unnecessary duplication of carreras or the waste of human resources in preparing excessive numbers for professional specializations that offer few opportunities or have little likelihood of expanding. Table 22 contains a summary of the numerical and percentage distribution of enrollment in short and long carreras. Preparation for intermediate-level careers (programs less than four years) occupied 62.2 percent of all students in the regional branches; the majority of the group were studying in three-year carreras. Only 5.5 percent of the Centers' total enrollment were engaged in two-year courses, while more than one-third were in long carreras. Experience in other countries indicates that two years of intensive study at the post-secondary level are adequate to prepare qualified persons for many different careers. The sedes could contribute much to national development by aggressively seeking to provide training for emerging careers below the top professional level.

Unless priorities and functions of regional sedes are clearly delineated in the reform movement, the unique possibilities of these institutions may be dissipated by disproportionate dedication to prolonged carreras, which, even in a developing society concerned with educational reform, still are symbols of prestige. Jarry (1970, pp.32-35) concludes that there are significant differences in the factors which affect the choice of a long or short carrera.

An unfavorable economic situation is a major reason for students' deciding to study in a short carrera. In choosing to follow a long carrera, important influences are the student's family and the secondary school which he has attended.

It may be recalled that, in the field inquiry of this study, the large majority of respondents in the University Centers said that the functions of their respective campuses included general education, teaching in the basic sciences, and offering short- and long-term carreras for the preparation of professionals. The directors and coordinators of studies in the Centers generally viewed with favor the coexistence of short- and long-term carreras. Several respondents reported that students in the four- and five-year programs positively influence those in the shorter programs. Four of the five coordinators indicated that differences between the two types of carreras did not interfere with the quality or appropriateness of instruction; the situation evidently tends to be stimulating and educational for students in both groups. In some cases, such as in general education and basic sciences, students intermingle and one group may be stimulated by the experiences and reactions of the other. Sometimes, too, it is feasible for a student to transfer from one type of carrera to another within the same Center. Although all degrees awarded upon completion of a carrera are university degrees, one director did comment that a degree granted in a long carrera gives the recipient more status than one in a short carrera.

Carreras for Evening Students

Carreras offered to evening students are basically the same as those given in the day program, except that due to limitations of evening class hours, the evening carreras may take longer to complete than those studied during the day: a three-year carrera for day students may take four years for completion in the evening. Students usually attend evening classes four or five hours per evening, Monday through Friday.

However, selection of evening carreras is severely limited; only six different specializations were available in 1969, making a cumulative total of 16 carrera offerings at the eight Regional Campuses (Table 23). Five Centers offered the specialization in administration, and four included elementary school teaching. Three Centers offered the carrera in public administration. Preparation for secondary school teaching, with specialization in music, was available at two campuses. The concentrations in public health technology and drafting technology were each given in one of the Centers.

The Center at Chillán, in the province of Ñuble, led the Centers in the number of evening carreras offered. This situation may have been stimulated by the fact that the people of Ñuble tax themselves directly in order to support completely the Center in their region. (See Chapter 10). The Center at La Serena did not include any evening carrera in its curriculum. Only a few of the evening carreras in 1969 operated with enrollments in all years of the respective sequences. Several had enrollments only in the final year of the program, for the demand was not adequate to justify continuing to admit first-year students.

TABLE 23

Day and Evening Carreras, by Standard Duration, 1969

University Centers	2-3 years		4-5 years		All carreras	
	Day	Evening	Day	Evening	Day	Evening
Arica	6	2	4	--	10	2
Iquique	1	2	3	--	4	2
Antofagasta	8	2	10	--	18	2
La Serena	10	--	11	--	21	--
Talca	9	1	6	1	15	2
Ñuble	8	3	5	1	13	4
Temuco	12	3	8	--	20	3
Osorno	9	1	3	--	12	1
Totals	63	14	50	2	113	16

Source: U. de Chile, STCU.

Tables 24 and 25 provide data of evening and day carrera enrollments in the individual Centers. Evening enrollment is concentrated in the short-term specializations. Except for the two carreras in the teaching of music, the four- and five-year specializations have not been considered feasible for the evening schedule. Student attrition is worrisome in some cases. The mere length of the carrera may be a deterrent to employed adults. Moreover, formal education for a second career has little, if any, following in Chile. University-level evening education is still relatively new in Chile. Principal interest thus far in the provinces is in training for management, public administration, and elementary teaching. It is likely that, as socioeconomic development proceeds in Chile, more and more employed adults will become aware of new opportunities and will seek additional training and education. The Regional Centers, as well as other institutions, have considerable responsibility for informing their communities about such developments and attracting older students who wish to improve themselves. It is significant that the university's preliminary proposal for a new organic statute includes a commitment to develop evening studies for workers (U. de Chile, Congreso Universitario Transitorio, 1970, p.28). Admittedly,

TABLE 24

Distribution of Enrollment in the University Centers, by Day and Evening Carreras, 1969

University Centers	2-3 years Day	2-3 years Evening	4-5 years Day	4-5 years Evening	All carreras[a] Day (N)	All carreras[a] Day (%)	All carreras[a] Evening (N)	All carreras[a] Evening (%)
Arica	429	148	227	--	656	7.9	148	15.0
Iquique	39	91	120	--	159	1.9	91	9.3
Antofagasta	750	17	728	--	1,478	17.7	43[b]	4.4
La Serena	673	--	774	--	1,447	17.3	--	--
Talca	709	156	596	58	1,305	15.6	214	21.7
Ñuble	737	112	185	27	922	11.0	139	14.1
Temuco	1,172	310	686	--	1,858	22.2	310	31.5
Osorno	433	39	103	--	536	6.4	39	4.0
Totals	4,942	873	3,419	85	8,361	100.0	984	100.0

Source: U. de Chile, STCU.
Calculations by author.

[a] The 1969 data for total enrollment, and its percentage distribution among the Centers, are contained in Tables 4 and 8, Chapter 2.

[b] This includes 26 artesanos who were matriculated but not classifiable within regular carreras.

TABLE 25

Percentage Distribution of Enrollment for each Center
and for all Centers combined, by Day and Evening Carreras, 1969

University Centers	2-3 year carreras Day	2-3 year carreras Evening	2-3 year carreras All	4-5 year carreras Day	4-5 year carreras Evening	4-5 year carreras All	All carreras Day	All carreras Evening	All carreras Total
Arica	53.4	18.4	71.8	28.2	--	28.2	81.6	18.4	100.0
Iquique	15.6	36.4	52.0	48.0	--	48.0	63.6	36.4	100.0
Antofagasta	50.2	1.1	51.3	48.7	--	48.7	97.2	2.8	100.0
La Serena	46.5	--	46.5	53.5	--	53.5	100.0	--	100.0
Talca	46.7	10.3	57.0	39.2	3.8	43.0	85.9	14.1	100.0
Ñuble	69.5	10.6	80.1	17.4	2.5	19.9	86.9	13.1	100.0
Temuco	54.1	14.3	68.4	31.6	--	31.6	85.7	14.3	100.0
Osorno	75.3	6.8	82.1	17.9	--	17.9	93.2	6.8	100.0
All University Centers	52.9	9.3	62.2	36.6	0.9	37.5	89.5	10.5	100.0

Source: Table 24.
Calculations by author.

Note: Percentages in all rows but the last one based on total enrollment within the respective Centers. The last is based on 9,345 as 100 percent.

the successful offering of evening carreras, in their present form, is difficult. The introduction of a credit system, which is regarded favorably in the reform deliberations within the University of Chile, would permit needed flexibility in the scheduling of courses. Certainly a steady diet of classes five nights per week might dim the enthusiasm of many employed adults. A little more time for independent study and for other normal pursuits would be salutary.

Sex Distribution in Carreras

Using data for the 12 carreras with the highest enrollments in 1969, Table 26 indicates sex distribution of enrollment.

TABLE 26

Sex Distribution in Centers, 1969

Carrera of highest enrollment	Men (N)	Women (N)	Total (N)	Men (%)	Women (%)	Total (%)
Elementary school teaching	370	1,167	1,537	24.1	75.9	100.0
Administration	551	170	721	76.4	23.6	100.0
Agricultural technology	652	56	708	92.1	7.9	100.0
Secondary school teaching, English	189	485	674	28.0	72.0	100.0
Social work	89	452	541	16.5	83.5	100.0
Secondary school teaching, biology	293	237	530	55.3	44.7	100.0
Nursing	10	481	491	2.0	98.0	100.0
Home guidance	—	474	474	—	100.0	100.0
Secondary school teaching, mathematics	241	172	413	58.4	41.6	100.0
Nutrition and dietetics	4	322	326	1.2	98.8	100.0
Public administration	198	95	293	67.6	32.4	100.0
Chemistry technology	164	125	289	56.7	43.3	100.0
Totals	2,761	4,236	6,997	39.5	60.5	100.0

Source: U. de Chile, STCU.
Calculations by author.

All or nearly all students in home guidance, nutrition and dietetics, and nursing were women, and more than three-fourths in social work and elementary school teaching. Women constituted 72 percent of the enrollment in secondary school teaching, with specialization in English. Men comprised 92 percent of the students in agricultural technology and made up a large majority in administration and public administration. Men registered modest majorities in chemistry technology and in secondary school teaching with specializations in mathematics and biology. These data indicate that both men and women are admissible to all carreras, and that curricular planning in the Regional Centers has taken into consideration occupational fields which might be especially appealing to men or to women.

SUMMARY

The continuing subscription to a nucleus of general education and the basic sciences in the short carreras of the Centers is testimony that human resource development is not regarded merely as a process of occupational training. The main curricular pattern in the eight Centers of the provinces conveys a deep concern for the full development of students. A growing number of specializations, with durations ranging from two to five years, give evidence of the desire and will to prepare students for professional service in different occupations.

In the early years of the Regional Colleges it was necessary to modify the original plan for two years of general studies as a basis for further study. In general, however, an equivalent of more than a semester of a two- or three-year carrera still is devoted to general education. Requirements and electives in general education have varied with the characteristics and subject orientation of the specific carrera. Analysis of the four- and five-year parallel carreras of the University Centers reveals a dichotomy in their educational goals. By definition, parallel carreras are the same as those which the faculties of the University of Chile offer in Santiago. Specializations in nursing and social work do reflect some recognition of the importance of general education in preparing students for those careers. On the other hand, the carreras in secondary school teaching contain little, if any, acknowledgment that teachers, too, must have a mature understanding of forces and conditions which do and will affect their students, as well as themselves, as professionals, citizens, and parents.

The most significant achievement of the University Centers in their building of a curriculum is embodied in the twenty or more intermediate-level professional carreras which they now offer. Perhaps, too, an important contribution was made through the two-year carreras in elementary school teaching and social work assistance. In spite of the difficulties in veering from the established way of doing things, the Centers have demonstrated in these and the continuing specializations that much can be done in occupational education within a post-secondary program of two years. A great deal of care has been given by the Centers, the regulating faculties, and the DEG, DCCU, and STCU as coordinating organisms of the university, to the planning and development of short carreras. During the first years of the 1960s a concentrated effort was made to enlist services and sources which might assist in determining the suitability of different carreras for individual Regional Colleges. Activities of this kind have been less systematic during recent years.

In spite of uncertainties and obstacles, the University Centers have achieved a high measure of continuity and stability in carreras which they have introduced. Very few specializations have been entirely discontinued, and a number have been consolidated and reorganized. Many adaptations and modifications of carreras, or of their scheduling, have resulted from budgetary limitations and, in some instances, from a dearth of employment opportunities for graduates.

Early planning of the Regional Colleges placed considerable emphasis upon the prospect of students' transferring to the University of Chile in Santiago after completing general studies or a portion of a specialization in the provinces. Faculties at first were neither receptive to general studies nor to accepting transfer students. Several faculties did agree to admit selected students who had begun a certain carrera in a Regional Center. Such arrangements have virtually disappeared since the transition of the colegios regionales to centros universitarios.

The distribution of enrollment among the carreras indicated considerable spread in the fields of education, health, administration, and agriculture; enrollments were heavily concentrated in programs for the preparation of elementary and secondary school teachers. Further analysis of carrera enrollments provides information which could be useful in determining priorities for the immediate future. Approximately three-fourths of the total enrollment of the eight sedes in the provinces was concentrated within a dozen carreras; the remaining quarter of the enrollment was spread among 22 carreras. Yet, only 7 of the 34 specializations were given in one Center of the eight, while 15 of the carreras were offered in four or more of the branches. The situation suggests a condition of excessive duplication and too little specialization among the Centers.

In view of the early commitment to prepare students for middle-level occupations, the University Centers in 1969 had a healthful concentration in their short carreras of more than 60 percent of the total enrollment, but enrollment of employed evening students was light. Short-term carreras for this group have been offered with much difficulty. Enrollments in many of the individual carreras of the

University Centers indicated sex preferences which reflected common traditional cultural attitudes toward certain occupations. For example, women students were attracted to nursing, while men students predominated in agricultural technology. More significantly, a substantial majority of Center students were women, which is contrary to the situation in the university at Santiago.

CHAPTER 5

THE CURRICULUM: DEVELOPMENT, EVALUATION, AND INSTRUCTION

CHARACTERISTICS OF CURRICULUM DEVELOPMENT AND EVALUATION

Basis for Introducing Carreras

Earlier references to the planning of new carreras in the Regional Centers have verified the concern of the DEG and the DCCU during the early and middle 1960s for occupational studies and the ascertainment of regional needs. The concern apparently has persisted, but during the past several years little relationship has been maintained with national agencies in the fields of manpower analysis, planning, and economic development. A number of the Center directors did express interest in obtaining information prior to the introduction of new specializations. One director mentioned the use of sources such as studies by the university, national plans, and data gathered by the Center's office of guidance services. Another director commented that inquiries were made in the community in order to determine regional needs. For deciding upon the continuation of carreras already established, two criteria which several directors mentioned were student demand for the specialization and the employment opportunities for graduates.

The heads of carreras and departments who were interviewed were asked how they became informed of the employment situation for graduates, particularly regarding the regional and national manpower needs. More than one-third reported that they secured information about employment needs in the region from professionals in various fields. Other means of obtaining regional information included visits to employers, requests from employers to the Centers, use of publications, meetings of interested persons, and studies by the Center or the university. A number of carrera chiefs replied that they had no regular means for obtaining such information, or that they secured it occasionally by casual and sporadic contacts.

For ascertaining national needs as indicated by employment opportunities in the respective carrera, nearly one-third of the respondents reported referring to studies completed by other organizations. Several mentioned professional associations, published announcements of vacancies, and occasional personal contacts. Most important, more than one-third of the group declared that they did not know the national need for graduates in the respective carrera for which they had a principal responsibility.

When asked whether the individual Center offers new carreras only when financial resources are adequate to provide necessary personnel and facilities, directors' responses were contradictory. One simply said, "Yes"; another replied that such a condition does not occur in Chile. This director endorsed operational planning and said that there are two prerequisites for the establishment of a new carrera: (1) importance of the proposed program to the community, particularly the community's ability to employ future graduates in the field; and (2) adequate resources, to be determined by a study of financial feasibility and the availability of necessary personnel, equipment, and facilities. These criteria, except for the omission of reference to cost per student and the necessity of field practice opportunities in the community, are the same as those which were presented in 1968 to the Superior Council of the University Centers (U. de Chile, Consejo Superior de Centros Universitarios, 1968b, p.3).

Procedures for the establishment of new carreras have varied little since the foundation of the Regional Colleges. Currently, however, the instructors and administrators of the sedes are participating more actively than they did in the formative years. During that period the DEG was vested with more authority and responsibility than now resides in the Technical Secretariate of the University Sedes in the Provinces (formerly Secretaría Técnica de Centros Universitarios[1]). Furthermore, the Colleges during their introductory period had few staff members who could contribute to the planning of a new carrera.

Initiative for exploring the desirability and feasibility of offering a new carrera may arise in the Centers, the STCU, or in a faculty at Santiago. Once the outcomes of the proposed training are delineated, the representative of the appropriate faculty works with staff members of interested Centers, and curriculum specialists of the Technical Secretariate in the preparation of a plan of study. The resulting proposal is submitted to the faculty for its consideration. Meanwhile, the plan of study is tentatively introduced in one or more of the Centers. Subsequent to reviewing visits at the Center(s) by the faculty representative and other colleagues, the faculty may approve the carrera and the professional degree which will be granted to its graduates. Then the Superior Council of the University Centers reviews and acts upon the proposal. Final approval then may be given by the Superior Council of the University, whose approbation results in the rector's decree of authorization (U. de Chile, DCCU, 1968d, pp.27-29).

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[1] The symbol STCU will be used as previously to refer to either of these organizations, for the new name reflects only a change as a result of the sede status of the Centers.

Planning of Courses

The plan of courses at the university level in Chile historically has been confined to a schedule of lectures, supplemented by professorial lecture notes. But the director and staff of the DEG, and subsequently the Coordinating Department of the University Centers, devoted much attention to planning individual courses. Objectives were specified for each course, so that there might be a logical development in the selection of content, activities, bibliography, teaching methods, and evaluation procedures. The DEG used a standard outline in preparing the courses of study for the intermediate-level carreras. With regard for the objectives which had been established for general education in the Colleges, the department prepared descriptions of a series of courses in the arts, literature, social sciences, and natural sciences, as well as in Spanish, English, and the general requirement Introduction to University Studies. Courses in the basic sciences generally were developed by committees which staffs of the intermediate-level carreras selected. Technical and professional courses at a more advanced level generally were prepared by committees of corresponding faculties in Santiago and of instructors from the University Centers (U. de Chile, DEG, 1964, pp.73-78).

An illustration of course planning may be drawn from the sequence at the Center of Antofagasta prior to its opening. Shortly afterward a similar program was carried out at Temuco. The curriculum coordinator of the DEG met with all instructors at Antofagasta in order to explain course planning, general education, instrumental subjects such as Spanish and English, and the principles underlying the foundation of the Regional Colleges. Further discussion of course objectives, content, methods, and evaluation were related to the aims and functions of the new type of institution.

According to a report of this experience:

> The teachers' attention was called to the use of modern teaching methods. By talking to them about the modern findings in the psychology of learning and by insisting on the principle of "learning by doing," the excessive use of the expository method was discouraged,

> and the importance of direct observation, the study and reading of originals were stressed. . . . This was perhaps the first time in the history of Chilean higher education in which a work of this kind had been undertaken. . . . Hence the explanations and recommendations given for the use of such procedures as discussion, case study, role-playing, field trips, and others, were not only novel and interesting, but rich in possibilities for improving their teaching (U. de Chile, DEG, 1963a, App. I, p.2).

The general meeting with the instructors was followed by individual interviews in order to discuss planned courses of study. Subsequently, through the directors of the respective Centers, the curriculum coordinators of the STCU commented upon course plans of instructors who communicated with them.

Another important work in planning related to the transfer courses which the Regional Colleges offered. Those courses presumably would be the same as those given in the university at Santiago, so that students who completed them might transfer successfully to the university. It was necessary to obtain courses of study, laboratory guides, bibliographies, and supplementary materials from instructors in the Faculty of Philosophy and Education.

Curriculum Development Activities

Curriculum development and revision have been facilitated during the past decade in a number of ways. Coordinators of the DEG and its successor the DCCU visited the Centers to consult instructors and conduct brief seminars on curriculum development, evaluation, and problems of the individual carreras. Representatives and colleagues from the various faculties also have gone to the university's branches in order to review the work being done in the carreras which they sponsor, and to assist instructors in resolving problems and improving their courses of study.

A more comprehensive approach to curriculum improvement has been through seminars organized by the central coordinating and service bodies for the Centers, with chiefs of carreras and other instructors invited to participate. For example, during three weeks of January 1968, the DCCU organized a teaching seminar for 28 instructors of professional subjects in the health specializations of the Centers. It was conducted in collaboration with the school of health of the university in Santiago. Subjects of the seminar included origin and philosophy of the Centers, psychological and sociological aspects of teaching, characteristics of students, selection of content, group work techniques, resources and methods of teaching, and evaluation procedures (U. de Chile, DCCU, 1968a, p.1).

A similar two weeks' seminar convened in March 1969 for the teachers in the nursery school teaching program, and graduates in chemistry technology met in August 1969 with the heads of the carrera and the coordinating professor of the STCU to analyze the new plan of study which would be proposed to the Faculty of Chemistry and Pharmacy. Also in 1969, as a result of an agreement between the STCU and representatives of the Faculty of Medicine, separate meetings were held of the heads of carreras in nursing, medical technology, and obstetrics. In May of the same year, coordinators and instructors in the carrera of elementary school teaching convened for three days with staff members from the Faculty of Philosophy and Education in order to discuss evaluative criteria and individual courses of the plan of study (U. de Chile, STCU, 1969, pp.16-19).

Students, too, have begun to participate in such activities. Student representatives in the carrera of administration met in December 1969 with various officials and presented a request to change the name of the carrera to business administration. Much of the initiative and preliminary planning of these seminars and sessions may well be credited to the STCU, which has tried to be responsive to the interests of personnel in the Centers.

Similar group reviews continued in 1970. In March, teachers and heads of the carrera in nutrition and dietetics assembled in the STCU offices with representatives of the Faculty of Medicine and the coordinating professor of the STCU. The purpose of the sessions was to analyze the plan of study and to reach agreement on approaching various problems in the program. Similar discussions again were organized for professors and heads of carreras in nursing and nursery school teaching. In chemistry technology additional seminars were organized to study the establishment of uniform criteria and practices for the carrera. It was expected that soon thereafter a proposal would be made to the sedes in the provinces, and then to the Faculty of Chemistry and Pharmacy, that the carrera be extended to four years (U. de Chile, STCU, 1970, pp.11-14).

Early in 1970 the STCU director and staff believed that a series of brief conferences should be held with faculty representatives and delegates from the Centers to review various carreras and the programs of basic sciences. The resulting projects, which presumably would extend also to vocational guidance and library development, were being financed by the prior grant from the Ford Foundation to the University of Chile.

Agreements reached at such seminars are not binding decisions, but rather a basis for information and discussion in the Centers and in the corresponding faculties at Santiago. The seminar participants hope to establish a high degree of consistency in the content and activities of the respective carreras. It is too soon to tell whether this process will be effective without formal procedures and actions. In any event, it is dubious that the current approach to curricular review will have much impact upon the original versions of parallel courses in the collaborating faculties.

It is commendable that, even during the several years of reform activity and tribulations, a high level of interest in the Regional Centers has been demonstrated by representatives and others in the Faculties of Medicine, Agronomy, Chemistry and Pharmacy, and Philosophy and Education. The preliminary activities in the STCU and the university as a whole in 1970 seemed auspicious for deeper engagement of staff members from other collaborating faculties in the curricular activities and development of the sedes in the provinces.

Concern for Evaluation of Programs

The 1964 Master Plan states that "Evaluation in the Regional University Colleges has been utilized not only to appraise the students' achievement, but also to diagnose and so to improve their capacity for learning." (U. de Chile, DEG, 1964, p.80) Within this framework it was evidently intended that the measuring instruments which would be developed would also serve to evaluate the educational program of the Colleges.

Prior to 1964 the DEG studied the evaluation principles and practices which teachers in the Regional Colleges were applying. Subsequently, the DEG's coordinator of evaluation and measurement prepared and distributed guides on criteria, standards, and procedures of evaluation to the Colleges. Instructions were given on the planning, preparation, application, and evaluation of tests. The coordinator visited the campuses to study the practices and problems of evaluation, and further exchanges of experience and techniques of instructors were planned, together with analyses and distribution of the achievement tests that teachers used. The DEG planned finally to prepare standardized tests for the Colleges, in cooperation with their teaching staffs (U. de Chile, DEG, 1964, p.82), but this stage of the evaluation program was not realized. Even conceding that the objective was a desirable one, the task of serving eight growing arms of the university in this way probably was too formidable.

In 1968 the DCCU held that evaluation processes were a fundamental part of the curriculum development and course revision. In fact, the Department had the principal responsibility for evaluating the eight Centers as a group (U. de Chile, DCCU, 1968d, p.45). Evaluative activities were used to determine the extent to which the objectives of courses and programs were being realized and to consider the expected outcomes in student behavior, selection of course content, learning activities, teaching methods and materials, bibliographies, and testing. Surely the many sessions of various carrera groups on curriculum and course development are implicitly, if not explicitly, evaluations of accomplishments and disappointments.

It is difficult to ascertain in what degree and form evaluation of the educational programs of the individual Regional Centers actually occurs. In five of the Centers the institutional administrators judged to be most closely associated with curriculum development were asked, "Is there in the Center any systematic way of evaluating the plans of study, including professional or technical subjects, general education, and the basic sciences?" Two responded "Yes"; three answered "No." The former group said that evaluation procedure included the application of ordinary norms at various times of the year, and of joint discussions among the heads of carreras and the coordinator of studies. A coordinator of curriculum at the STCU responded to the same question by saying that a systematic program of evaluation does not exist in the Centers; representatives of some Santiago faculties do evaluate the results of Center carreras under their respective jurisdiction, however. They study the results of teaching, teaching materials and equipment, the final examinations, and the characteristics and reports of field experience and other practical work. Such evaluative activity is done principally at the end of the academic year by representatives in the Faculties of Agronomy, Medicine, and Chemistry and Pharmacy.

In order to maintain a professional preparation that is realistically related to professional practice, it is essential that the staffs in the various carreras have regular contacts with practicing professionals. In many cases this relationship may be simplified by having part-time instructors who function principally as professionals in the field. Nearly one-half of the responding chiefs of carreras reported that they and other members of the teaching staff learned of developments in the professions through contacts with professionals, with organizations and employers in the region, and with professional associations. Several respondents specified other sources, including graduates of the program, publications, and the university schools in Santiago. One-fifth of the group said that they received only occasional information.

Even though systematic or research-oriented evaluation does not characterize evaluation of educational programs in the Centers, or in the STCU at this time, an appreciation of the need for evaluation is evident. Participants in the evaluation process now include administrators, instructors, and students of the Centers, STCU staff members, and representatives from 10 of the 13 faculties in Santiago. During the early days of the Centers, their staffs had little voice in either curriculum development or evaluation. Then the directors became active participants and gradually the Centers have assumed more and more responsibility. If inter-Center meetings follow careful reviews among the instructors in each Center, perhaps the best evaluation program at this stage is that involved in seminars on revision of courses and carreras. To be effective, however, judgments and agreements must be reached on a base of commonly acknowledged objectives for the respective courses or specializations. Agreements then shared with teachers and departments in each Center can be an excellent basis for further analysis and evaluation of the individual Center's program in the same field. A process of this kind is consistent with principles of open discussion, coordination, and decentralization of responsibility and authority.

Evaluation of Student Achievement

Considerable care was taken by the University Centers and the DCCU to assure that teachers and students had ample guidance and information in grading and examination procedures. Common criteria were established for evaluating student achievement (U. de Chile, DCCU, 1967b).

In general, the Centers function on a semester basis, each one lasting 18 weeks--16 weeks for teaching and 2 for examination and testing. The first semester extends from March to July, the second semester from August to December. If the Centers fail to have instruction throughout the scheduled semesters, for reasons of a strike or other emergencies, they attempt to regain the lost time by extending the school year into the normal student vacation periods at the end of the academic year and between semesters.

An information file on each student's health records, economic situation, aptitudes and interests, vocational plan, grades, and attendance is maintained in Center offices of guidance services and is available for the instructors' use.

At the beginning of each academic period, the instructor is expected to prepare a written summary of the academic work which will be evaluated in his courses, the forms of evaluation which he will use, and the weighting which he will give to each of the performance factors to be evaluated. It is specified that instructors will consider certain aspects of learning, such as comprehension of concepts, in the evaluation of students' work. Grades are given on a 1 to 7 scale: 7 very good; 6 good; 5 more than adequate; 4 adequate; 3 deficient; 2 poor; and 1 very poor. Grades are given to students periodically during the semester, as well as at the end of the semester. Students who have maintained a 75 percent attendance record and complied with the requirements of the course are qualified to take the final examination. They may do so at the end of the semester or the beginning of the next semester. The criteria and standards for evaluating the examinations are determined jointly by instructors in the respective specialties. A project or other form of evaluation may be used if the nature of the course so justifies.

If a student attains a grade of 4 or above in a course, he may enroll in the next course in the same subject as outlined in the plan of study for the carrera. A student who fails in a course must repeat it the following semester. Special arrangements and alternatives are specified under the regulations for those who have other academic difficulties. Some time limits are specified, but there are no procedures for disqualifying a student from further enrollment.

A professional *práctica* (field work, project, or, in some cases, a culminating seminar) is required in each carrera. In order to qualify for this part of the program, the student must have passed all professional subjects of the carrera prior to taking the práctica.

The records of students who apply for graduation are reviewed and certified in the Centers. A second analysis is completed at the STCU, which certifies satisfactory completion of all requirements for the specific carrera and degree. The appropriate faculty then awards the degree in the case of intermediate-level or short carreras. Degrees for parallel carreras are granted by the rector. The following university degrees may be granted to graduates of the sedes in the provinces:

Agricultural technician (*Técnico agrícola*)
Home counselor (*Orientadora del Hogar*)
Food technician (*Técnico industrial en alimentos*)
Assistant in construction technology (*Asistente técnico en construcción*)
Drafting technician (*Dibujante técnico*)
Applied arts technician (*Técnico artístico*)
Administrative technician (*Técnico administrativo*)
Electronics specialist (*Electrónico*)
Social worker (*Asistente social*)
Public administration technician (*Técnico en administración pública*)
State teacher in elementary education (*Profesor de Estado de educación general básica*)

State teacher in secondary education with a specialization
(Profesor de Estado en especialidad)
Librarian (Bibliotecario)
Chemistry laboratory technician (Laboratorista químico)
Nutritionist (Nutricionista)
Obstetrics practitioner (Matrona)
Nurse (Enfermero)
Medical assistant (Asistente médico administrativo)
Public health technician (Técnico en saneamiento)

This listing does not specify degrees applicable to the carreras of medical technology (tecnología médica), nursery school teaching (educadora de párvulos), and public accounting (contador público) (U. de Chile, DCCU, 1968d, Appendix VI). Every person who receives a degree or title upon completing one of the authorized carreras in a sede of the provinces legally is a professional university graduate (U. de Chile, STCU, 1970, p.17). This policy tends to reduce differences in prestige attached to certain carreras. Perhaps too, it will preclude difficulties that some graduates of short carreras have had in the past in not being recognized as professionals.

PROBLEMS OF CURRICULUM DEVELOPMENT

A number of special problems of curriculum development in the sedes relate to regional and national manpower needs, the influence of professional associations, competition of other institutions of higher education, the supervision by Santiago faculties, and intra-university and inter-university communication.

In view of the previous discussion (Chapter 2), perhaps it is necessary here only to point out that the total curriculum of the sedes must depend upon the direction which they take, or the role which they are assigned, during the years ahead. Espousal of general education, instrumental subjects, and intermediate-level carreras will depend upon the objectives, functions, and priorities of the eight sedes in the provinces. Curriculum, organizational structure, and building plans then may be developed upon a firm base, which in turn should be realistically dependent upon available financial resources.

Regional Needs for Specialized Manpower

Continually, the University Centers in the provinces have attempted to serve the needs of their respective regions. One way is in preparing students to fill the needs in certain professions or occupations. Under the reform movement of the university and the consequent aspiration to be the national university of Chile, each sede in the provinces is also expected to respond to national manpower needs in the organization of its educational program. Indeed, the centros universitarios of the provinces were supposed to serve national needs also. Let us look first at the concept of regional needs.

Many Chileans would agree that regional needs for specialized manpower training in the North pertain to mining, fishing, agriculture, and associated industries. In the South, important manpower needs appear to be in agriculture, livestock raising, and tourism. The metropolitan region of Santiago, where approximately one-third of Chile's population resides, is a controlling force in affecting national manpower needs in industry, trade, finance, and government.

Obviously each province and each urban community has an infrastructure, a complement of service and marketing activities, as well as more or less important segments of agricultural and industrial production. Plans of the national government, especially CORFO and ODEPLAN may affect considerably regional employment opportunities in education, health, business and industry, and agriculture. In Chile now it is very difficult, if not impossible, to tailor a curriculum of specialized occupational carreras with full awareness of regional needs. Are the acknowledged needs to be only for graduates in specialized fields who will be employed in the community at a reasonable salary, or are they to be those which most people recognize as essential to social and economic development, but are not yet backed up by real employment opportunities? Given a definite regional need, how great must it be, or how long-lived, in order to justify committing educational resources to manpower preparation? (See Chapter 9 for views of prominent residents on needs of various regions.) As a matter of fact, it is well known that a modest need of one region may also be duplicated in one or more other regions, or may be more properly considered a national need. Therefore, a carrera in one or two Centers may be adequate in such cases to meet the limited and specialized need for manpower. Toward this end, in 1968 Director of DCCU Francisco Salazar proposed that certain carreras be developed in specified Centers in order to avoid duplication. He referred especially to those carreras requiring costly equipment and scarce specialized personnel. Such a program, he said, should be based upon a transfer system and a program of scholarships so that students from all regions would have equal opportunity to choose a specialization (U. de Chile, Consejo Superior de Centros Universitarios, 1968b, p.4).

The Centers of the University of Chile in the provinces have attempted to secure data about regional manpower needs by occasional interviews and requests for information. A systematic study of developmental plans, employment, and probable future employment opportunities could be made in each region where a Center is located. Such studies, coordinated with regional activities of CORFO and ODEPLAN, and aided by specialists from the University of Chile, would be conducive to sound curriculum-building and also a rewarding venture for students and staff members who are interested in community relations.

National Needs for Specialized Manpower

Studies of national manpower needs can be useful guides to curriculum development in the sedes of the university, as well as in other institutions of higher education. A recent study of the Economic Commission for Latin America states:

> Development is largely the result of the transformation of social life by science and technology, the latter being, in the final analysis, applied science. . . . But both science and technology need devotees to create and apply them. A complex corps of professionals must therefore be trained at various levels, and this is mainly, although not entirely, the task of the universities. It is not only the training of senior professional personnel that matters however; a due proportion must be observed between the senior and the other levels. The training of intermediate-level personnel is again largely the responsibility of the universities. As an industrial society is built up on certain standards of performance and efficiency, it needs intelligent personnel who are selected for training by methods which are both strictly impartial and designed to ensure that the most will be made of the intellectual capacity available in the society (Economic Commission for Latin America, 1968, p.101).

In a similar vein, a recent Latin American conference on education recognized the importance of including manpower training as an integral part of overall planning and in conjunction with educational planning (UNESCO, 1966a). More than 40 manpower studies have been completed in Chile since 1960. Ernesto Schiefelbein, while director of the Office of Planning in the Ministry of Education, consolidated and analyzed the findings of 31 studies dealing with careers covering 80 percent of persons reported in the 1960 Census to have obtained a higher education. Using projections of supply and demand in various professions, Schiefelbein (1969b) estimates that, in 1975, there will be deficits in excess of 5 percent in several different professional areas served by the University Centers: nursery school and elementary school teaching and various technical occupations. Differences of definitions accounted for some of the difference in the projections of demand for technicians (técnicos). Approximately one-third of the technicians were believed to have learned their skills on the job, rather than by the completion of studies. Schiefelbein notes that technicians in many cases can be replaced by professionals of higher preparation, so that the projected deficit of nearly 7,000 in this broad field needs to be considered further by studies in the various specialties. Smaller deficits in nursery school teaching and elementary school teaching might be reduced considerably by changes in the rate of population growth and by substitution of trained persons from related occupations. In the latter field the deficit is expected to disappear in the late 1970s. Other careers in which substantial surpluses are projected for 1975 are nursing, nutrition, obstetrics, and secondary school teaching. The last field needs more study in order to determine the situation in various specializations.

Projections of supply and demand for high-level manpower in various occupations are subject to a number of variables. Even for the near future, supply may be contingent upon university-level retention rates, relative salary or income levels, and, in a few fields, the feasibility of substitution from one occupation to another. Projections of demand in the short-run may be affected by shifts in governmental policies and programs, by underemployment in complementary occupations, and by the rate of economic growth nationally and in various economic sectors. Data from Chile's Census of 1970 also provides a basis for review and revision of manpower projections. Notwithstanding these limitations, regional manpower studies can be useful in the educational planning and guidance services of the sedes in the provinces.

In 1969 Hasche (1969) studied the need for qualified personnel in major occupational groupings and in various economic sectors. The projected need for professionals and technicians in 1970 was estimated at 181,330. The estimate for 1980 was 259,409, an increase of 43 percent within the decade. While this figure considerably exceeds the projected increase of total employment in Chile for the same period, it may be a guide for the University Centers in their future planning, but it must be emphasized that not all professionals and technicians are university-educated. Additional studies of projected supply and demand in specific occupations would be highly useful for educational planning in the Regional Centers, as well as other Chilean institutions.

Manpower studies may be viewed broadly as attempts within one important sphere to project results of the cultural, social, and economic development of the country. In Chile, which has a unitary government, national policies and programs have great influence upon trends in manpower development and utilization. If shifts occur in policies and programs, the graduates who have been trained for specialized fields soon feel the impact of these changes.

Three carreras in the Regional Centers recently have been affected by governmental action: agricultural technology, home guidance, and elementary school teaching. In the course of considering the introduction of a specialization in agriculture, Irma Sálas consulted the Minister of Agriculture about job specializations, a plan of study, the need for personnel, and probable employment of graduates. The Minister requested that a large number of technicians be prepared over a period of several years (Sálas, I., interview, 1970). Subsequently, election processes brought a change of the political group in power, which adversely affected the employment opportunities of graduates whom the former Minister had wanted. Some Chilean employers, including governmental agencies, prefer to employ persons of less training at lower salaries, or to select employees for political reasons rather than for their professional qualifications. Now, many graduates in agricultural technology are unemployed, or not working in the field for which they prepared themselves. The responses from the sampling of graduates (summarized in Chapter 8), tend to verify this condition. It appears as if the national government has changed its conception of need for agricultural technicians, or funds are not available to fulfill the need.

In 1968 Rector Barbosa acknowledged the importance of employment for graduates, but asserted that this problem should not prevent the university from continuing to prepare professionals which the country needs (U. de Chile, Consejo Superior de Centros Universitarios, 1968b, p.7). Meanwhile, Center staffs, together with the STCU and the representative of the Faculty of Agronomy, are undertaking a study of the carrera itself (Table 27), including its relevancy to cultural and technological change in Chilean agriculture, rural development, and agrarian reform. The national plan for agricultural development can be a fruitful source of information for use in reviewing the carrera (Ministerio de Agricultura, 1968). It is, however, regrettable that the plan does not give consideration to the significance of technical personnel in carrying out the plan itself.

TABLE 27

Carrera of Agricultural Technology: a Typical Plan of Study[a]

Category and Type of Course	Semesters and Hours of Scheduled Courses					
	1	2	3	4	5	Total
Basic Sciences						
Theory classes	6	2				8
Laboratory or practice	9	3				12
General Education						
Theory classes, specified	2	2				4
Theory classes, electives	4	4	4	4		16
Laboratory or practice	6	6				12
Technical or Professional Subjects						
Theory classes	1	9	11	10	11	42
Laboratory or practice	1	4	15	14	16	50
Total Hours						
Theory classes	13	17	15	14	11	70
Laboratory or practice	16	13	15	14	16	74
All Courses	29	30	30	28	27	144

Source: U. de Chile, Secretaría Técnica de Sedes Universitarias, Carreras Universitarias de las Sedes de la Universidad de Chile en Provincias: Planes de Estudios, 1970, pp.21-24.

[a] This is an outline of the specialization in general agriculture within the carrera of agricultural technology. It contains 3 to 8 hours more of professional subjects than do the other carrera specializations.

Agricultural production in Chile has been stagnant for several years; the curtailed employment of technicians is not surprising, but it illustrates the dilemma of the Centers' attempting to define and introduce new carreras attuned to the changing conditions of a developing society. The evident need for technicians may be widely recognized, but this is not equivalent to an effective demand for trained graduates.

The Economic Commission for Latin America has expressed a pessimistic view of the potential outlet for technical experts in agriculture:

> In theory, it is imperative to reform and mechanize agriculture, and this entails more specialists; but in practice, their employment opportunities are negli-

> gible. The great majority of private farms are economically too small to employ a technical expert, and the remainder consists of estates that are lying idle or are worked by old-fashioned methods in which technical expertise plays little part. In view of the present state of agriculture in Latin America, the number of technical experts produced by the universities is, with few exceptions, perfectly adequate. In fact, paradoxically enough, it is often excessive. Most of them eventually enter government service, which would be entirely creditable if they were employed as advisers or leaders of rural development. In practice, however, they are mainly given bureaucratic tasks that often have little or no real connection with agricultural work (Economic Commission for Latin America, 1968, p.113).

Announced plans for strengthening agricultural education at the secondary level in Chile are promising, but the training of agricultural advisers and technicians should be given mainly at the university level (Wolfe, 1965, p.74).

A similar situation exists in the carrera for home guidance workers. Consistently, reports indicate that suitable employment has not been obtained by a considerable number of these graduates. Home guidance workers are prepared to inform and work with families and groups in rural and marginal areas. They assist and guide organizations and neighborhoods in efforts to improve their lives, especially in nutrition and food production, clothing, home construction, health, recreation, and budgeting. In this relatively new field, too, the Ministry of Agriculture is the principal employer. Currently staffs in the Centers, together with the STCU and the representative of the Faculty of Agronomy, are reviewing this carrera to determine which modifications should be made.

The social need for home guidance workers appears great, but their employability at this time is low. The Centers might continue to curtail this training so that it becomes commensurate with current employability of graduates; the Centers might adapt the carrera so that it includes a group of occupations related to family life, neighborhood organization, and rural development; the national government might change its employment priorities, or increase its resources for employment of personnel; or the graduates themselves might influence employment decisions by educating employers, organizations, and neighborhoods regarding the need for their services.

It is essential in this occupation, as in many others that now require about the same level of training, that a detailed study be made of supply and demand during the years ahead. Such a study should consider the relevancy and the quality of training, since these might be the determinants for the contribution to development and the employability of graduates, as well as salary and other incentives which are important in attracting competent persons. For the unemployed or underemployed graduates themselves, consideration should be given to alleviating their frustrations and increasing their employability. Special short programs might retrain them to serve as teachers, extension workers, middle-level administrators, or community development officers.

The sedes of the provinces face a different problem in reviewing the carrera for the preparation of elementary school teachers. This program has more than twice the enrollment of any other carrera in the Centers. A study of the projected supply and demand for elementary school teachers in Chile, according to two different hypotheses on the utilization of present facilities for their training, concludes that a surplus will exist by 1977, or by 1979. Depending upon the respective hypotheses, and the most recent estimates of population growth, the surpluses in 1980 are estimated as 1,759 or 6,486 (Corvalán and Schiefelbein, 1969). With reference to this study, the Minister of Public Education, Máximo Pacheco Gómez, foresaw an excess of approximately ten thousand elementary school teachers by 1980 (El Mercurio, Jan. 24, 1970). He estimated that about four thousand qualified teachers, in addition to the estimated surplus, would not want to work away from their homes. Furthermore, the Minister announced that an excess of teaching candidates would result in preference being given to graduates of the state normal schools, which are under the general direction of the Ministry. These facts were incorporated in Pacheco's request to the rectors of the eight universities of Chile that they not accept new students to the carrera in elementary school teaching in 1970. Earlier, in 1969, the Ministry of Education ceased subsidizing in the Regional Centers certain aspects of the carrera, especially expenses entailed in student teaching. In response to this situation, including the experience of their own graduates, three Centers in 1970 closed the carrera to entering students, while two others restricted the subject specializations within the program. The planned development of the normal schools in Chile, which now accept only applicants who are graduates of the secondary schools, further complicates the situation (El Mercurio, Mar. 21, 1970). The quality of training necessary, the personnel and material resources available for training teachers, and the role of the university itself should be analyzed prior to any final resolution of the Regional Centers' continuing responsibility for preparing elementary school teachers.

In these observations about three carreras of the sedes in the provinces, it is not assumed that the supply of trained personnel in a specific field should, or is likely to, equal the demand at any given time. The history of developed or developing countries supports this negative position. Included among the many conditions and variables that affect projections of manpower requirements are complementary and substituting occupations, learning an occupation by entering it rather than by studying it, resistance to cultural and technological change, reluctance to accept employment away from one's family or one's city of residence, prolongation of the period of training, availability of higher-trained personnel at the same salaries, preference of some employers for less-trained personnel at relatively low salaries, failure of employers to recognize that higher productivity will result from employing better trained personnel, lack of suitable salaries and incentives in the respective occupations, shifts in governmental policies, and changes in sectorial or national rates of economic growth. None of this is to suggest that human beings, really human resources in an economic sense, should be regarded only as investment capital which may be used to maximize man's contribution to the production of goods and services. Certainly education for citizenship for the enhancement of freedom and dignity of man are worthy goals. But they express only in part the aspirations of societies. **Harbison and Myers comment** that conflict between economists and humanists is unnecessary.

> If one of the major goals of nearly all societies today is rapid economic growth, then programs of human resource development must be designed to provide the knowledge, the skills, and the incentives required by a productive economy. If one rejects the notion that investments in education must be productive, then he should be prepared also to reject the goal of rapid economic progress. But if he accepts the goal of rapid economic growth and the idea that education must be oriented in significant aspects to promote it, he need not thereby reject a humanitarian concept of the role of education. The development of man for himself may still be considered the ultimate end, but economic progress can also be one of the principal means of attaining it. . . .
>
> The goals of modern societies, as we have already stressed, are political, cultural, and social as well as economic. Human resource development is a necessary condition for achieving all of them. . . .

> In an advanced economy the capacities of man are extensively developed. In a primitive country they are for the most part underdeveloped. If a country is unable to develop its human resources, it cannot develop much else, whether it be a modern political and social structure, a sense of national unity, or higher standards of material welfare (Harbison and Myers, 1964, p.13).

From the beginning the Regional Colleges, now sedes in the provinces, have been concerned with the individual development of students and with preparing them for a career suitable to their respective interests and capacities. Inevitably the students, instructors, and administrators of these institutions have been attentive to the employability of their graduates. If the admission of students or the plan of study is not compatible with the realities of the career, the Centers may themselves try to correct the weaknesses.

But cases of shortage or surplus of manpower in individual occupations do not rest only with the complex forces which affect social and economic development. The spirit of university reform should support initiative and resourcefulness which the Regional Centers might use within their own communities in reaching for appropriate courses to follow. Together, and as campuses of the University of Chile, they could do much to promote a coalition for educational planning and the development of human resources.

Regarding manpower shortages and surpluses in the economic sphere, Harbison (1965, p.14) declares:

> Most modernizing economies are confronted simultaneously with two persistent yet seemingly diverse manpower problems: *the shortage of persons with critical skills* in the modernizing sector and *surplus labor* in both the modernizing and traditional sector. Thus, the strategy of human resource development is concerned with the two-fold objective of building skills and providing productive employment for unutilized or under-utilized manpower. The shortage and surplus of human resources, however, are not separate and distinct problems; they are very intimately related. Both have their root in the changes which are inherent in the development process. Both are related in part to education. Characteristically, both are aggravated as the tempo of modernization is quickened. (Underlining indicates italics in original text.)

Among the shortages which he identifies, Harbison (p.15) observes that, "the shortage of technicians, nurses, agricultural assistants, technical supervisors, and other sub-professional personnel is generally even more critical than that of fully qualified professionals." More research is needed, such as the ongoing study of health occupations by the National Health Service in Chile, in order to determine the precise applicability of the last statement to Chile. Until the results of such studies are available, the sedes in the provinces will continue to grope for solutions to regional and national needs for specialized manpower.

Role of Professional Organizations in Curriculum Planning

To qualify for entrance to a given profession, a specific university degree often is necessary in Chile. Regulations for entrance to an occupation may be legal, in the form of laws or decrees, as in elementary and secondary school teaching. In other cases the professional associations or colleges (asociaciones colegiados) may control entrance by certifying to a person's fulfilling requirements for an occupation and thus making him eligible for membership in the association. These organizations are authorized and created by law. They are an important force in improvement of preparation for entrance into professions and occupations and in protection of the professions against the undermining of professional standards. But they are also conducive to maintaining a rigid structure of occupations, thus making the development of new or subordinate occupations of related character formidable.

An illustration of recent developmental activity is that of the College of Accountants. In July 1969 the College invited observers from the Faculty of Economic Sciences, the Regional Centers at Arica and Iquique, and the STCU to discuss the possibility of introducing a carrera in public accounting at the university level (U. de Chile, STCU, 1969, pp.24-25). Heretofore training for careers in public accountancy has been available only in the commercial institutes, which are not commensurate with institutions of higher education. Subsequent activity by the Centers and the College of Accountants, along with the support of STCU, resulted in university authorization to offer the three-year carrera in public accounting conditionally at both Centers. This process clearly is one of up-grading the profession of public accounting.

More conservative were the actions several years ago of the College of Nursing with reference to the establishment of a new carrera in the Regional Colleges. Shortly after the first College was established at Temuco, the DEG proposed that a two-year course of study in nursing be introduced in order to prepare practical nurses. The idea was designed to alleviate the serious shortage of nurses in Chile. Nevertheless the College of Nursing opposed the proposition as a threat to the professional status of nurses. It was feared that the practical nurses would compete with the professional nurses who had four years of training. The National Health Service, which was employing nurses' aides with two years of secondary school, and the Faculty of Medicine in Santiago also resisted the DEG proposal. Finally, the College of Nursing approved a two-year training program which a number of the Centers did introduce. After two years of study, students were permitted to transfer to Southern University in order to complete the four years of training. A number of Centers introduced the complete four-year program after they became centros universitarios.

The College of Technicians has had a more generalized role in relation to the Centers. This organization does not accept any program of training which has a duration of less than four years. It rejected some carreras so that it was necessary to change the name of the degree which the university would grant upon the completion of a short carrera (Sálas, I., interview, April 1970). For example, to prepare laboratory technicians in chemistry it was necessary to use the degree laboratorista químico rather than técnico químico. Likewise, the Chilean association of professional social workers viewed with disfavor the introduction of a two-year carrera for the training of social work aides. A compromise resulted in offering the specialization and granting a diploma rather than a professional degree. A similar restrictive position was taken by the College of Civil Construction. Students in the Centers who completed the short carrera in construction technology desired to continue their studies in the more advanced carrera for the preparation of civil constructors. The College opposed this idea, thus upholding a method of limited admission to the occupation. A student who completes one year of study at the Osorno Center may be eligible to continue the carrera of civil construction in the school of engineering at Santiago.

Relations between professional associations and the Regional Centers of the University of Chile appear to be no different than they are between the associations and other Chilean institutions of higher education. The concern of professional groups for having only fully qualified members in their fields is laudable and reasonable. Certainly they can be sources of information and guidance to institutions which prepare students for professional service. Recently, at least two professions, law and social work, have been the subject of systematic inquiries about conditions and practices in Chile. Self-study does indicate an awareness of possible imperfections. As Chile's labor needs become more differentiated, it is likely that more subprofessional fields will develop as they have in other societies. The collaboration and criticisms of established professional associations could be highly useful if the Regional Centers are to prepare students to engage in these new occupations. On the other hand, consistent professional opposition to shifts in the occupational structure would be stultifying both for economic and technological development, and for progress in education and training as well.

Competition or Coordination of Universities

Competition and duplication of higher education services in the Chilean provinces further complicate the processes of curriculum development in the eight sedes of the University of Chile. Each Regional Center may attempt to offer whatever it wishes without regard to other institutions in the same region, as long as the carrera receives the approval of the University of Chile. On the other hand, the Centers may attempt to coordinate their educational programs with those of nearby institutions, reflecting their desire to maximize educational services to the community and to avoid wasteful competition and uneconomic use of scarce resources.

While here the Regional Centers are the focus of attention, it should be acknowledged that their presence to some degree may be viewed by other institutions as evidence of unnecessary duplication of services and of pseudo-decentralization and monopolistic tendencies on the part of the University of Chile. This point of view probably will become stronger now that the centros universitarios have attained even more status as sedes of the University of Chile. So, they become stronger competitors for the funds which the national government allocates to public and private institutions of higher education.

Ernesto Schiefelbein (1968, pp.86-88) comments in his recent analysis of higher education in Chile that in the provinces the competition of universities is keen. In the city of Antofagasta four institutions of higher education, the sede of the University of Chile, a branch of the State Technical University, the University of the North, and a State Normal School compete for the small fraction of about 271,000 inhabitants[2] in the province who can qualify to attend. The result has been an excess of graduates in some carreras, such as teacher education, which results in an unemployment situation for graduates that has been serious. At the University of Chile sede in Antofagasta, the director reported that there was no duplication of carreras with those offered at the Technical University. Carreras in elementary and secondary school teaching are offered at both the Regional Center and the University of the North. At Arica, in Tarapacá province and a few miles from the northern frontier of Chile, programs in nursery school education and public accounting are offered at both a branch of the University of the North and the sede of the University of Chile. In the same province, at Iquique, the sede of the University of Chile and the State Normal School both give preparation for elementary teaching. The former, however, gives training only to employed teachers who need up-grading, and the Normal School has only students who come from the secondary schools.

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[2] Population figures in this section have been obtained from ODEPLAN, 1968a, Cuadros D51 and D52.

At La Serena, which is 295 miles north of Santiago and has a 49,000 population, some duplication of carreras in elementary teaching and civil construction exists among the sede of the University of Chile, the State Normal School, and the branch of the University of the North at nearby Coquimbo. The State Technical University at La Serena offers a complete carrera in civil construction, while the Regional Center offers only the first year of study.

At Talca, approximately 160 miles south of Santiago with a population of about 81,000, the elementary teaching preparation has been provided by both the Catholic University of Chile and the sede of the University of Chile. The Superior Council of Catholic University recently announced the purchase of buildings and land in Talca to reorganize and strengthen its sede there. Students will be permitted to begin a carrera there and then continue at other Catholic universities, in accord with previous agreements and with a system of curricular flexibility. According to the policy of the Catholic University, its sedes may be authorized to grant degrees, to create intermediate carreras related to academic programs, establish departments of teaching and research, and carry on a regional program of communication and culture in connection with the national programs of the Catholic University (Universidad Católica de Chile, c.1969). The superior council appointed an executive director of the Talca sede who, together with a regional administrative council, will prepare a development plan for the branch and, subject to approval by the Superior Council, the director and his local council will be responsible for implementing the plan (Universidad Católica de Chile, 1970, p.15).

Chile, a branch of the State Technical University, and the University of the Frontier, a dependency of the Catholic University of Chile. The city of Valdivia, nearer the coast, is served by the Southern University and another campus of the State Technical University. The estimated total population is 743,000 in the provinces of Cautín and Valdivia, where these five campuses are located. Estimated populations of Temuco and Valdivia in 1966 were 91,000 and 80,000 respectively. Reports from the Regional Center at Temuco indicate that some cooperative efforts among various institutions in the region might be feasible.

It is beyond the scope of this work to consider the multiple problems and the probable advantages of developing a coordinated system of higher education in Chile, but for some comments on duplication and competition of institutions of higher education, see Chapter 9. Reference here has been made only to the problems of the individual Regional Centers as they try to build courses and programs which are most suitable for the needs and interests of the people in their regions. Can this or should this be done unilaterally, without considering the curricula or plans of other institutions which serve the same area? Should regional agreements be explored in order to avoid, so far as possible, the offering of overlapping or duplicating services and programs? Perhaps accords, one of which exists among the universities in Valparaíso, would enhance the foundations for an acceptable plan for national coordination.

President Frei addressed the rectors of all Chilean universities on April 10, 1969, and he remarked upon the tendency of Chilean universities to extend themselves by establishing campuses in the provinces and encouraging each province to be the seat of one or more universities. Once established, the branch or campus seeks to obtain professors of professional stature and to have costly laboratories and equipment. Each campus seeks to expand and to satisfy the demand of the majority of secondary school graduates, who wish to continue their studies at the university. Some of these sedes in the provinces, the President noted, are dedicated to offering short carreras in the technical professions, leaving to the central campuses the responsibility for education at a high academic level. Students in the provinces often are disappointed by the carreras and technical professions; programs may be inadequately financed, the courses of study may not be appropriate for the degree which is granted, or graduates may be unable to obtain employment in their specializations. As a result of the founding of these centers and sedes in the provinces, demands for financial resources reflect the desire of each locality to have the most complete university possible, one than can compete in quality and quantity with its neighbors.

"The necessity," said the President, "that centers of higher education in the provinces relate themselves to the problems of the regions, that they offer students the best academic opportunities, and that they maximize the utilization of human resources, available equipment, and finances, makes urgent the coordination of university centers that now are related to the distant metropolitan area but not among themselves." (El Mercurio, April 11, 1969) The progressive coordination of the campuses and centers, in order to form regional universities of optimal size, would offer real opportunities to students in their own regions, and also provide adequate scientific and technical services throughout Chile.

In 1967 the Frei grovernment formed the Commission for the Coordination and Planning of Higher Education. Presided over by the Minister of Education, this Commission included a number of the rectors of the Chilean universities. A year later the government sent to the national Congress a proposed law for the organization and operation of a national system of higher education. The bill had been prepared by the Minister of Education with the collaboration and acceptance of the university rectors. When President Frei addressed the rectors in 1969, the higher education bill had been passed by the Chamber of Deputies and was pending in the Senate. One year later, the proposal was presented to the Senate Commission on Education (El Mercurio, April 12, 1970). The major problem has been to convince the rectors and others vitally interested in the university that meaningful autonomy will be guaranteed within a coordinated system of higher education. But, clearly, complete autonomy cannot prevail in all curricular and financial matters if any coordination is to be achieved.

Meanwhile, the University of Chile, including of course the eight sedes of the provinces, must continue to function in a setting which has become increasingly complex. While the University of Chile moves to propose a university statute to the Congress, and as political forces assess their concerns about a proposed national system of higher education, the regional sedes must serve the regions by introducing, improving, and discarding carreras.

Role of the Faculties

The principal exponents of relations with the Regional Centers are the designated representatives of the respective faculties and the coordinators of carreras over which they have jurisdiction. The faculty representatives with the STCU and the Centers, and the faculty coordinators of carreras, have considerable influence upon the actions of the faculty and the development of carreras after they have been authorized. In the early days of the Regional Colleges,

TABLE 28

Communication of Carrera and Department Heads
with Other Centers of the
University of Chile

Type of Communication	Number	Percentage
None	25	47
Casual and sporadic	9	17
Interchange of curricular materials and problems	8	15
Personal professional contact	4	7
Contacts through students	3	6
Other	3	6
No data	1	2
Totals	53	100

Regular communication with other Centers has been maintained by 15 percent of the group, who have exchanged curricular plans, course outlines, and experiences in dealing with mutual problems. The lack of inter-Center cooperation is offset partially by contacts with the University of Chile in Santiago (Table 29).

TABLE 29

Communication of Carrera and Department Heads
with the University of Chile, Santiago

Type of Communication	Number	Percentage
Corresponding school and faculty	26	49
Coordinator of STCU	8	15
School, faculty, and STCU	6	11
Indirect, through Center director	2	4
None	11	21
Totals	53	100

Sixty percent of the respondents replied that they maintained communication with instructional units of the University in Santiago. Slightly more than one-fourth reported similar contact with the STCU. The number of carreras in the Centers, incidentally, precludes having a specialist in each of the programs in the STCU. Each STCU coordinator is responsible for several carreras and programs in working with corresponding faculties and staffs in the

Centers. A department chairman in one of the Centers might have reason to consult certain STCU staff members with regard to general education, basic sciences, teacher education, curriculum development, evaluation, or methodology.

Again referring to Table 29, more than one-fifth of the respondents replied that they had no contact with the University of Chile in Santiago. If suitable staff development is to be achieved in the sedes of the provinces, and if the same or comparable requirements and standards of performance are to be maintained throughout the University of Chile, substantial improvement of intra-university communication will be necessary.

As staff members of sedes of the University of Chile, heads of departments and carreras depend principally upon the university for any communication or cooperation concerning the educational program. The proximity of other Chilean universities to individual regional sedes of the University of Chile is propitious for establishing inter-institutional professional relationships among staff members. Reports from the samplings of heads of carreras and departments (Table 30) show that one-fourth of them do maintain communication with colleagues in other universities.

TABLE 30

Communication of Carrera and Department Heads with Other Universities

Type of Communication	Number	Percentage
University of Concepción	5	9
Catholic University of Chile	2	4
University of the North	2	4
Southern University	1	2
State Technical University	1	2
Universities outside Chile	1	2
Various universities	1	2
None	33	62
No response	7	13
Totals	53	100

INSTRUCTION

Curriculum development and teaching methods are not always easily separated; in developmental activities of the University Centers the two subjects often have been emphasized jointly by various instructional groups. During the planning and formative stage of the colegios regionales emphasis was consistently given to the preparation of a highly trained teaching staff. The Department of General Studies and the Colleges wanted teachers who not only knew their subjects but knew how to teach them, and teachers who aspired to learn and supported the objectives of the new institutions. As noted in the Master Plan of 1964, the DEG promoted the use of teaching methods consistent with program objectives and modern techniques conducive to student motivation and adapted to individual differences (U. de Chile, DEG, 1964, p.78).

Approaches to Teaching

The use of various methods and techniques was regularly discussed in the materials which the DEG prepared for use in the Centers, and in the seminars organized in Santiago for the benefit of teachers. In these ways stimulation and guidance were provided in the use of different methods: lecture; discussion, including the colloquium, seminar, panel, and forum; role-playing; case study; programmed learning; field trips; and demonstration and laboratory. The instructors of the Colleges cooperated in the preparation of instructional materials and in the evaluation of methods and techniques which were used (U. de Chile, DEG, 1964, pp.78-79).

From 1965 to 1968, the Coordinating Department of the University Centers encouraged review and improvement of teaching methods and promoted the introduction of new techniques. In its activities the DCCU sought to facilitate high student achievement, emphasizing the psychological aspects of learning; diagnostic and remedial teaching was advised for new students and older students having academic problems.

In its work with teachers in the Centers, the Coordinating Department also gave considerable attention to developing in students the ability to think critically and to apply scientific methods. So, it was believed, students would be better able to adapt and to interpret social, scientific, and technological changes. The DCCU also advocated use of problem-solving and community resources. The content and activities of the carreras presupposed a direct relationship with practices and problems of professional services in the community; consequently, contact with and experience in the use of community resources were regarded as important in professional development.

Independent study was encouraged by the DCCU because it offers the student opportunities to study without the immediate supervision of his teacher. The student receives guidance by reporting to or consulting with his instructor periodically. Independent study has been regarded favorably in the Centers as a means of promoting student resourcefulness, facilitating the development of important abilities and techniques, and permitting recovery from scholastic weakensses in courses or examinations. Such supervised special study allows more recognition of individual differences among students than does the ordinary class, and also it serves to introduce students to research methodology (U. de Chile, DCCU, 1968d, pp.31-38).

Programmed learning, audio-visual instruction, and action research were advanced by the DCCU in teaching seminars and in staff visits to the University Centers. Informative and illustrative materials on programmed learning and the use of audio-visual aids were prepared and distributed to the provinces, and demonstrations for interested instructors were offered at various Centers (U. de Chile, DCCU, 1969). For example, a DCCU coordinator visited the Centers of Arica and Iquique during a two-week period in late 1968. While at Arica she conducted a seminar on action research and also gave talks and demonstrations on the use of audio-visual materials. At Iquique she conducted several classes and taught students of home guidance the use of audio-visual materials for use in the community (U. de Chile, DCCU, 1968a, p.2).

Improvement of Teaching

Since improved teaching has been one of the avowed concerns of the University Centers, coordinators of studies were asked if their Centers had used measures designed to improve the effectiveness of teaching. Four responded yes, and one said no. When the heads of carreras and departments considered the question, "In your program is their any program to improve teaching?" 56 percent of them said yes, and 38 percent replied no (Table 31).

TABLE 31

Programs of Carreras and Departments for Improvement of Teaching

Type of Program	Number	Percentage
Periodic discussions, work sessions and study groups	18	34
Evaluation and coordination of courses and study units	6	11
Other[a]	6	11
None	20	38
No response	3	6
Totals	53	100

[a] Includes personal study, assistance from the office of guidance services, and participation in courses on teaching.

A stimulus or deterrent to improvement of teaching may be the opinion which instructors have regarding their institutions. A question addressed to the sample of teachers, including heads of carreras and departments, was, "What would you say is the general attitude within the Center with reference to innovation and experimentation in teaching?" The results are set forth in Table 32.

TABLE 32

Instructors' Opinions Concerning Attitudes Within Centers Toward Innovation and Experimentation

Attitude	Number	Percentage
Resists new ideas	3	3
Tends to conserve present practices	2	2
Passively tolerates new ideas, neither resistant nor supportive	23	20
Supports innovation and experimentation	38	34
Stimulates and helps whenever possible	45	40
No response	1	1
Totals	112	100

Methods of Teaching

An attempt was made to ascertain teaching practices and opinions of instructors about the instructional setting through questions about methods and materials for teaching, assignments for completion outside classes, and use of textbooks and languages. Instructors were requested to state the extent to which they used various methods of teaching theory-type courses (classes, or clases teóricas) and were invited to mention usage of other methods which were not specified in the question.

The results (Table 33) indicate the variation and flexibility of methods which instructors use. More than four-fifths of the instructors use the lecture-and-discussion method frequently; 28 percent often lecture without discussion; 44 percent never use the lecture method; and more than 40 percent frequently use questions on readings and student reports to the class. In view of the diversity of teaching specializations among the respondents, it is notable that a majority of the group use field visits frequently or

TABLE 33

Methods of Teaching in Theory-type Courses, by percentages[a]

Methods	Frequently	Occasionally	Never	Total
Lecture	28	28	44	100
Lecture and discussion	81	7	12	100
Discussion	22	32	46	100
Questions on reading	45	22	33	100
Oral reports of students	44	30	26	100
Field visits	24	28	48	100

[a] Sample numbered 112 instructors.

occasionally (given adequate transportation, field trips could be used in nearly every subject). Even more interesting, as an indication of flexibility and concern for the teaching-learning situation, is the occasional use of all of the listed methods.

Use of Instructional Materials

Use of a variety of teaching materials indicates a lively approach to teaching, a will to avoid tedious devotion to any single method or technique in the classroom and laboratory. Admittedly, some teaching materials are more easily used in some subjects, such as sciences and agriculture, than in languages or accounting. A laboratory guide probably is not so useful in an administration course as it might be in chemistry. Nevertheless, virtually all subjects lend themselves to the use of a variety of materials, provided instructors and students are reasonably imaginative and adventurous. Merely using new materials does not, of course, guarantee effective teaching. Usually, however, the application of new ideas stimulates both teacher and student and is conducive to better teaching and more learning. Even where more expensive materials and devices are rare or difficult to obtain, a creative approach to whatever is available in the physical environment can be highly productive.

Each instructor in the sample was asked to indicate the extent to which he used specific kinds of materials in his classes, laboratories, or field practice. In comparison with the responses on methods, Table 34 indicates that fewer instructors tend to use a variety of materials frequently. Conversely, a far higher proportion of responses dealing with materials were in the "never use" category.

TABLE 34

Use of Instructional Materials, by percentages[a]

Instructional Material	Frequently	Occasionally	Never	Total
Technical equipment	45	10	45	100
Maps, graphs, and tables	34	21	45	100
Films and slides	15	32	53	100
Laboratory or field practice manuals and guides	41	7	52	100
Raw materials	23	4	73	100
Agricultural land of region	12	12	76	100
Schools, factories, hospitals, and other establishments	35	25	40	100

[a] Sample numbered 110 instructors.

Maps, graphs, and tables can be useful in virtually any field of study, but only one-third of the respondents use them frequently, and 45 percent never use them. Only 15 percent use films and slides frequently; slightly more than one-half never use them. Several reasons may exist for the limited use of maps, graphs, films and slides. The materials themselves are in some instances not available, or are too costly for the institutional budget. If suitable photographs were taken by instructors in the field, it might be difficult to finance the processing of slides. Too, tables, graphs, and other illustrative materials often are present in professional journals, but these are scarce in the Center libraries. Most of the Centers have basic audio-visual equipment, but some of the instructors probably lack the confidence and skill to operate the equipment. If assistants are not available to organize and set up the machines, this alone will be a deterrent.

Illustrations of Teaching Techniques

The use of innovative teaching techniques might suggest the quality of teaching and indicate whether an institution nurtures experimentation. In the Centers unusual programs of teaching might well provide an opportunity for research as well as for effective learning. Teachers were asked to describe new or different teaching techniques which they were using in their programs (Table 35). Results were not spectacular, nor entirely disappointing; many teachers said their instructional techniques were neither distinctive nor novel. Tabular material indicates that a considerable number of the instructors were using techniques consistent with acknowledged concepts of good teaching.

TABLE 35

Teaching Techniques Used by Instructors[a]

Techniques considered novel	Number	Percentage[b]
Relating theory to practice; application of knowledge through cases, situations, and activities of laboratory and field practice	25	22
Achieving major participation of students through discussion, forums, dialogues, and expositions	26	23
Organizing students into working groups and seminars	13	12
Using illustrative methods and materials; dramatizations, films, role-playing, etc.	10	9
Visits and projects in the community	7	6
Preparation of bibliographies by students; discussion of texts	7	6
None	24	22

[a] Sample numbered 112.

[b] Some respondents used more than one technique so that total exceeds 100 percent.

Assignments to Students

Traditionally in Chile, as well as in other Latin American countries, study outside classes in many carreras is neither demanding nor regular. Until recently learning was expected to occur through listening to lectures and recitations based upon common reading. The Regional Centers have tried consistently to break away from these practices, and the regular use of laboratories and field experience, is one testimony to departure from customary practices. In order to obtain further information about teaching practices in the Centers, instructors were asked, "Do you customarily assign to your students work to be done outside class?" An overwhelming majority, 95 percent, replied yes; the remainder, 5 percent, said no (Table 36). More than three-fourths of the respondents reported that they frequently require students to study certain basic textbooks outside class; yet in several Centers instructors and administrators said informally that a basic textbook was not generally used in individual courses because they limited the students' reading unduly. In these instances preference ordinarily was expressed for the use of readings from various sources. Extensive use of complementary books was indicated by 79 percent of the instructors. Apparently these readings are generally from several

TABLE 36

Instructors Giving Work Outside Class,
by percentages[a]

Kinds of Assignments	Frequently	Occasionally	Never	Total
Study of required textbooks	78	11	11	100
Reading in complementary books	79	13	8	100
Group projects	58	17	25	100
Research on special problems	54	24	22	100
Preparation of oral reports for class presentation	45	31	24	100
Study of instructors' syllabus	35	12	53	100
Writing projects	23	34	43	100
Reading in periodicals	16	32	52	100
Projects in the community or region	15	12	73	100

[a] Sample numbered 112.

textbooks, rather than from specialized references.

The use of mimeographed instructors' notes, or syllabi, is common in many countries. They become more important when other basic readings are difficult to obtain. Only about one-third of the teachers employ this instrument frequently, while slightly more than one-half never use it. Writing projects, which obviously are requisite for improving skills of expression, were assigned frequently by less than one-fourth of the sample. If professional journals were accessible, they could stimulate student interest, be excellent sources of information about current developments in specific fields, and serve as references for reports and discussions in class. A majority of the instructors reported that they never assigned readings in journals. Nearly three-fourths of the sample never require students to conduct studies or projects in the community or region. Organized field experience constitutes a regular part of many carreras near the end of the course of study, but study and experience in the community need not be postponed so long. Such activity provides an excellent opportunity to relate theory to practice in a setting which directly affects the lives of students.

Use of Textbooks

Many Latin American countries have had difficulty in securing suitable textbooks for use at the university level. Those written originally in Spanish are increasing, but in some fields they are not yet considered to be satisfactory. If texts in English or another foreign language are used, students' competency in that language is obviously essential. Textbooks which have been translated into Spanish and published for use in Latin America may or may not be better than those written originally in Spanish. In the natural sciences or mathematics such works evidently tend to be satisfactory, but in the social sciences and related areas textbooks probably would be more useful if their illustrations and points of reference pertain principally to Latin American cultures. Still another consideration in the use of textbooks in a foreign language is the difficulty and delay in ordering and receiving them. Restrictions of imports and the scarcity of foreign exchange are not the least of the problems for instructors who would prefer to obtain textbooks, or references, from other countries.

Teachers in the sample were asked whether they required students in their courses that semester to read certain textbooks. A majority of the group said that they were using required textbooks in one or more of their courses, but 43 percent said they were not using a basic textbook in any of their courses. Rather, they prepared a bibliography for students and tended to emphasize usage of several textbooks in individual courses. Five instructors were not using either required textbooks or bibliographies. These data indicate less use of required textbooks than did the responses concerning assignments outside class. Possibly some respondents did not differentiate clearly between the use of "required textbooks" and "complementary books," as specified in the previous question. In any event, clearly a large proportion of instructors depend heavily upon students' reading one or more textbooks outside classes.

Students too were asked which readings they were required to complete in one or more of their subjects during the semester.

A large majority of the 46 responding students studied syllabi which their professors prepared. Nearly one-half of the students were expected to read various basic books on the respective subjects. A smaller proportion, one-third, used one basic textbook, and one-fifth reported that they read articles in periodicals. The small sampling of students probably accounts for much of the disparity between their responses and those of instructors.

Of the teachers who required textbooks in one or more courses, 50 percent used only Spanish texts; six required only English; more than one-fourth required some in English and others in Spanish; and only three instructors used texts in other languages--French and Latin. Even though teachers of English may be expected to use English textbooks, the language distribution of required textbooks and of complementary books for use in the library suggests the need for a continuing study of students' competence in reading and understanding written English.

Textbooks, required or optional, have little value unless students have ready access to them. Nearly three-fourths of the responding instructors stated that it was difficult to obtain basic texts; the balance said it was not difficult. A substantial majority of the instructors who were using textbooks or a group of complementary publications reported that most frequently students obtained these materials from the Center library; 11 percent said that students borrowed the books directly from them most frequently; and only 7 percent reported that students bought their textbooks most frequently. Thus students use various means to obtain textbooks, and students' responses corroborated their dependence upon Center libraries as a source of texts.

Lack of students' funds and the instructors' difficulty in obtaining a stock of textbooks indicate that students' purchases are not likely to become a primary method for obtaining textbooks. Gifts of multiple copies of textbooks may justify their being stocked in the Center libraries, but scarce library funds should not ordinarily be used for this purpose unless other means are not possible. It may be timely to explore the practicality of a universitywide system of book rentals or the establishment of a universitywide cooperative to secure textbooks in a more effective manner. Ready accessibility of reading material is crucial to maintaining a satisfactory program of extra-class assignments. This in turn is influenced by the number of class-hours of attendance per week, the work habits of students, and their ideas about the meaning and worth of higher education.

Supportive Facilities and Services

It was not within the purview of this study to evaluate facilities and services which affect the quality of teaching in the University Centers. But it was relevant to ascertain instructors' opinions of these items, so that the teachers' views of the work situation in the Centers might be further clarified. Therefore, this question was asked: "What is your opinion with respect to various conditions and services related to teaching in the Center?" Table 37 discloses that a large majority of the responding professors, including heads of carreras and departments, considered many facilities and services unsatisfactory in the Regional Centers. Among the items considered, only the duplication service was regarded favorably by a majority of the instructors. Respondents were given three choices in expressing their opinions: "satisfactory," "unsatisfactory," or "do not know." The third choice was frequently used in regard to laboratories and shops. Those who reported that they did not have knowledge or use of certain items are included in the percentage calculations. This arrangement permits consideration of all respondents.

TABLE 37

Instructors' Opinions about Facilities and Services, by percentages[a]

Facility or Service	Satisfactory	Unsatisfactory	Uncertain or Does not apply	Total
Equipment of laboratories	17	60	23	100
Equipment of shops	12	33	55	100
Audio-visual equipment	27	61	12	100
Instructional materials	22	76	2	100
Offices for instructors	38	61	1	100
Classrooms	45	55	0	100
Teaching assistance[b]	21	78	1	100
Technical assistance[b]	15	77	8	100
Duplicating services	56	43	1	100
Secretarial and clerical services	27	72	1	100

[a] Sample numbered 112.

[b] Items not included in the inquiry at Arica, so that 98 responses constitute 100 percent in these two instances.

The following items were judged unsatisfactory in the Regional Centers by more than two-thirds of the respondents: instructional materials, teaching and laboratory assistance, secretarial and clerical services, and technical assistance. (See Chapter 6 for a summary of instructors' responses regarding availability and need for technical assistants and teaching assistants.) Instructional materials include items such as charts, maps, models, folios, pictures, guides, filmstrips, slides, and raw materials; teaching and laboratory assistance may be provided by students or professional employees who work under the supervision of the instructor; technical assistance is advice, counsel, or other forms of professional aid given by visiting scholars and professionals; and secretarial assistance includes typing, filing, and necessary transcribing services. In general, dissatisfaction about technical, teaching, and secretarial assistance pertained to the dearth of it, not the quality of that available. Criticism of instructional materials applied to the limited amount and quality of available material.

Approximately three-fourths of those making judgments of laboratory and shop facilities and equipment held them to be unsatisfactory. It was not feasible in the study to establish any external standards of what "satisfactory" facilities would be. Probably the expectations and requirements of individual instructors ranged considerably, even in the same subjects. As I observed, the available science laboratories in the majority of the Centers are modern and fairly well equipped. They were financed substantially by the first Ford Foundation grant to aid in the development of the Regional Colleges and by the loan from the Bank for Inter-American Development. Current complaints of crowded conditions and inadequate laboratory facilities do not seem unreasonable in view of the limited enrollment capacity for which the completed laboratories were built. Certainly, further analysis of utilization and flexibility of laboratories in use and scheduling would be helpful in planning or replanning subsequent stages of construction.

A substantial majority of the instructors in the sample considered audio-visual equipment, their offices, and classrooms to be unsatisfactory. Many facets of audio-visual instruction may have been a part of the evaluation: quality, variety, and maintenance of equipment; coordination of audio-visual services; ability to use the equipment; and accessibility of appropriate rooms and materials for use with the equipment. It is evident that a need exists for careful analysis of various aspects of audio-visual instruction, including the need, the feasibility, and the coordination of use of materials by scheduled distribution among the Centers. Perhaps the STCU, the audio-visual center, faculties, and appropriate commissions of the university could provide assistance in the development of this important method of instruction.

As with the laboratories, it is probable that some of the dissatisfaction with instructors' offices is the outcome of an enrollment in most Centers well above the capacity of the buildings. Small private offices for each full-time instructor are desirable, especially because he or she is required to be on the campus 30 to

36 hours per week. Educational and building priorities, together with economic realities, may permit provision for only two-instructor offices. Certainly a concentrated effort should be made to assure satisfactory office arrangements.

Dissatisfaction with classrooms is the result of inadequate space. Cultural traditions make it difficult to extend the hours of classes through the midday period, for luncheon is customarily the principal meal of the day for the entire family. A complete study of the capacity and usage of available classrooms, offices, laboratories, and shops should be combined with a projection of need during the years to come. In view of the student demand now, and surely in the future, priorities for construction and space utilization standards merit major consideration and review.

Some comparative analyses were made to determine whether substantial differences occurred in the responses of different groups among the instructors. A comparison between the replies of heads of carreras and departments, and those of other instructors, revealed only minor differences in proportional distribution of responses. Opinions of each group showed a steady pattern of consistency with respect to all items.

Since perceptions of those in different carreras may vary considerably, special analysis of responses from those associated with seven different carreras was included. Again, patterns of response were in general consistent with results for the entire group, with a few distinctions. Nursing respondents reported all items predominantly unsatisfactory; social work replies indicated marked dissatisfaction with instructional materials, technical assistance, teaching assistance, and audio-visual equipment; agricultural technology respondents were highly dissatisfied with shops, instructional materials, and teaching assistance; those in elementary school teaching were dissatisfied with instructional materials, offices for instructors, and secretarial assistance; respondents in secondary school teaching, with specialization in English, reported unusual dissatisfaction with library references, laboratories, teaching assistance, and secretarial aid; and those with specialization in mathematics unanimously considered technical assistance to be unsatisfactory. A considerable number of the "unsatisfactory" ratings were unanimous among those responding from the same carreras in different Centers. These comments should be considered as highlights, for the prevailing attitude was one of dissatisfaction with extent or quality of facilities and services.

LIBRARY RESOURCES AND SERVICES

The Regional Colleges, together with DEG, encouraged reading and the use of libraries, as consistent with the aim of fostering independent study, assignments outside classrooms, and modern methods of teaching (U. de Chile, DEG, 1964, p.79). Considerable importance was assigned to libraries in the development of the Centers. The first Ford Foundation grant facilitated university purchase of reference volumes and other library resources in several of the new colleges. The University of Chile and the University of California, in further accordance with the first Ford Foundation grant to assist in the development of the Regional Colleges, arranged in 1963 for technical assistance in planning the college libraries. Assistance included collaboration with the DEG and Regional College librarians in preparing library plans, developing the organization and administration of library services, scheduling acquisitions for basic library collections, and generally aiding in efforts to organize and strengthen the college libraries. Assistance was also given to the architects responsible for designing the facilities of five Centers, thus assuring suitable space and layouts for the individual libraries (Manitzas, 1964). The BID loan to the University of Chile included allocation of $167,000 for books and other library materials (Inter-American Development Bank, 1962b, p.19).

It is generally acknowledged in Chile that the guidance and direction of professional librarians are essential to the development of a suitable library for an institution of higher education. Professional librarians are trying to achieve a status commensurate with their preparation and services. Table 38 summarizes library personnel in the Regional Centers. In 1969 each campus employed at least one professional librarian; two Centers (Temuco and Antofagasta) each had four professional librarians on their staffs. Three of the head librarians were teaching three to eight hours per week in courses related to their professions.

TABLE 38

Library Personnel

Classification	Number of Employees	Number of Centers
Full-time professional librarians	17	7
Part-time professional librarians	1	1
Full-time nonprofessional personnel	10	5
Part-time student assistants	14	4
Other personnel	4	3

TABLE 39

Library Services

Type of Service	Number of Centers
Loan books to instructors and students	7
Loan books to nonprofessional Center personnel	7
Reserve books for student use on request of instructors	7
Obtain inter-library loans for instructors and students	7
Loan journals to instructors	7
Provide bibliographical assistance	6
Inform instructors about new books and periodicals	6
Offer recreational reading	5
Accesible to residents of the community	7

With a few minor exceptions, indicated in Table 39, reports from the seven cooperating Centers show that their libraries provide a considerable and a uniform range of services. Interviews and examination of bulletins of library procedures provide ample evidence that they are applied systematically and well (Chapter 3, Tables 14 and 15).

Reports available in 1969 from seven Center libraries stated that the number of volumes ranged from 3,728 to 16,700 at the respective campuses, the median being about 8,000 volumes. Comparable data on library loans were not obtainable. At the library of the Talca Center, which opened with approximately 600 volumes in 1965, the reported annual loans for use in the library or at home during 1968 exceeded 174,000. This was more than a 200 percent increase over the circulation reported for 1967 (U. de Chile, Talca, 1967, 1968).

Three librarians reported that their respective Center's budget included a specific amount for library development; four reported that no specific allocation was given. A number of the librarians of the University Centers expressed in their annual reports appreciation of books donated by agencies of the United Nations, the U.S. Agency for International Development, a number of embassies, and other organizations. For example, Talca's sister city of Newington, Connecticut, contributed books on the basis of bibliographies which staffs of different carreras had prepared. The recent annual library budgetary allowances for the three Centers which reported them ranged from equivalents of less than $1,000 to about $15,000.

It was not feasible to ascertain the rate of occupancy, or representative attendance, of the Center libraries. Accomodations in five of them ranged from 30 to 138 stations. The sample of students was given the question, "How often have you studied in the Center's Library or used its services?" A majority of respondents use the library occasionally, and nearly one-fourth do so once or twice per week. In visits to all Center libraries I have observed that a considerable number of students use them as a place to study.

To secure an indication of the participation of instructors in the development of the Center libraries, the sample of teachers was asked to estimate how many requests for books and journal subscriptions they had presented to their respective Center libraries during the past year. More than one-third reported requesting 20 or more books; the median request was 14 (Table 40).

TABLE 40

Estimated Books Requested by Instructors for Library Purchase During Past Year

Number Books Requested	Instructors (%)[a]
None	9
1 - 9	26
10-19	27
20-29	16
30-39	5
40-49	5
50-99	4
100 or more	8
Total	100

[a] Sample numbered 112.

Instructors subsequently were asked to estimate the extent to which the Center library was able to comply with their specific requests to purchase books. More than one-fourth reported that all or the greater part of their requests were obtained; one-third said less than one-half of their requests were met; and 21 percent said that none of the books which they requested were obtained.

An effort also was made to determine the interest of instructors in securing journals for use in the Center library. More than one-third did not remember requesting the library to subscribe to any journals, but more than one-third had requested three or more subscriptions, and more than one-fourth had requested one or two within the past year (Table 41).

TABLE 41

Journal Subscriptions Requested by Instructors
During Past Year

Requests for Subscriptions	Instructors (%)[a]
None	36
1 - 2	29
3 - 4	23
5 - 6	5
7 or more	7
Total	100

[a] Sample numbered 112.

Approximately one-fifth of the instructors requesting subscriptions reported that their respective libraries complied; the remaining four-fifths indicated that the library did not and presumably could not comply with their requests.

The responsiveness of the Center libraries to educational needs necessarily depends upon available resources and the participation of departments, carrera staffs, and individual teachers in library development. Professional librarians in the Regional Centers could provide more services if they had more opportunity to collaborate systematically and regularly with the teaching staff in dealing with questions of development and acquisitions. Within the operations of the Centers, if not in the university budgetary procedures, each Center library should have an annual budget which would permit planning and application of priorities. Apparently this procedure may be adopted as part of the university reform.

In every Center library a standing committee of the librarian and a representative group of teachers responsible to the normative council could be an effective means toward library development and maintaining close collaboration between librarians and instructional groups. Three Centers do have a council of librarians and teachers, including, in one instance, the director of the Center. In some cases the Center librarian consults directly with the director or with the STCU. The professional authority and responsibility of the librarians should not be vitiated in any arrangement which is adopted, but a program of acquisitions and library services can be more significant to the Center's students and staffs if it reflects concerns and recommendations of instructors, as well as students.

According to reports from five Centers, the availability of journals and newspapers is severely limited, and I can verify that this condition is typical. Three of the Center libraries have from 2 to 4 magazine subscriptions each; one Center subscribes to 6 journals, while another has 76 subscriptions. In three of the Center libraries only one newspaper is obtained regularly. Three other Center libraries secure two to four different newspapers, while one receives eight newspapers. Within a library budget for each Center, or a coordinated library budget for all sedes in the provinces, an allowance should be made for journals and newspapers. Some librarians have obtained complimentary subscriptions to various publications, which is commendable but not sufficient to warrant ignoring the need for a separate budgetary allocation. Recognizing that present resources probably do not permit recurring expenses of many annual subscriptions for each Center, it may be feasible to arrange through the STCU for the purchase and distribution of selected reprints and rotational distribution to the Centers of less basic professional journals in selected fields.

The librarians of the responding Centers were asked, "What is your opinion of the facilities, services, and resources of the Center library, in relation to the enrollment, educational program, and requirements of the Center?" The responses indicate that the Center librarians regard the libraries as generally unsatisfactory (Table 42).

TABLE 42

Chief Librarians' Opinions of Center Libraries

Library Characteristic	Satisfactory	Fair	Unsatisfactory
Reference section	--	5	2
General magazines	--	1	6
Scientific and special journals	--	1	6
Collections of books on special subjects	2	4	1
Books for recreational reading	1	4	2
Newspapers	2	1	4
Maps and other illustrative materials	1	4	2
Bibliographies for use of students in certain programs	3	2	2
Space and facilities	1	2	4
Availability and quality of library services	3	4	--
Budget of library	--	--	7

Forty-seven percent of the ratings are in the "unsatisfactory" class, and 36 percent are rated "fair". Only 17 percent of the 77 possible choices were in the "satisfactory" group. Certainly, there is no reason to suppose that the Center librarians are complacent, but neither should these ratings suggest that they are discouraged or professionally desperate. It must be remembered that four of the reporting Center libraries are four or five years old, and that the older ones are only seven to ten years old. Obviously much remains to be done.

The sample of 112 instructors and heads of carreras and departments also were asked to express their opinions on several facets of the libraries in their respective Centers. Judgments of the library services were nearly evenly divided between the "satisfactory" and the "unsatisfactory" ratings. One-half of the respondents believed the reference sections to be unsatisfactory, and 43 percent regarded them as satisfactory. Evaluations of book collections and the availability of journals and newspapers were far more critical. Ninety percent gave "unsatisfactory" ratings to the collection of books in their respective specialties, and 92 percent considered the supply of journals and newspapers to be "unsatisfactory." In general, the views of the instructors tend to be consistent with those of the Center librarians.

Several of the instructors' ratings, when classified by Centers and by various carreras, warrant comment. In evaluating library services, instructors in two Centers were about evenly divided between the "satisfactory" and "unsatisfactory" ratings. Responses in two other Centers were predominantly favorable, but in three Centers the opinions were predominantly unfavorable. Consideration of the reference section resulted in a fairly even division of ratings in four Centers, a markedly favorable rating in one Center, and a reverse emphasis in another. Opinions of specialized book collections and of journal and newspaper resources were unanimously or predominantly unfavorable in each reporting Center.

Comparison of responses of instructors in seven different carreras yields similarities and differences. A majority in each of three carreras registered a favorable evaluation of library services and in three other carreras the majority gave an unfavorable rating. Except for two carreras, the responses regarding the reference section indicated no definite pattern. Ten of 11 respondents in secondary school teaching, with specialization in English, responded with an "unsatisfactory" rating; five of six instructors in nursing did likewise. In each of the carreras considered, responses were markedly unfavorable concerning specialized book collections and the availability of journals and periodicals, the latter being rated unanimously "unsatisfactory" in five of the carreras.

When financial resources are severely restricted, sometimes it is more difficult than usual to plan carefully for the future. Several coordinators of studies were asked if their respective Centers had a program for library development that implied use and growth of the library in relation to changing necessities of the educational offerings. They said that heads of the carreras listed their needs, and the administration determined whether funds were available to fulfill them.

Presented with the question, "Are there specific plans for the future development of the Library?" the majority of the librarians said yes. Explanations indicated an emphasis upon improvement of the reading room and the catalog, more book acquisitions, better audio-visual equipment, and more library personnel. Evidence was lacking that individual librarians had formulated comprehensive or specific plans for the future. Perhaps guidance or technical assistance is needed in order to establish priorities and norms.

Five of seven Center librarians said that they did have contact with other Centers and institutions to discuss common operating problems. A number occasionally consulted professors in the School of Library Science at the university, or attended its seminars during summer vacations. Other sources of information or aid included the National Association of Librarians, the STCU, professional persons and organizations in the region, and professional correspondents and publications.

Determination of the direction in which Center libraries should go and what they might achieve realistically within a few years might appropriately parallel those deliberations concerning the purposes and functions of the sedes themselves. Planning and activity of this kind would do much to assure that the orderly libraries of today will develop into an integral and complementary feature of the educational program in each Center.

SUMMARY

The various carreras of the University Centers have been the focus of curriculum development in recent years. General education and the basic sciences received much consideration during the formative years of the Regional Colleges but have been somewhat neglected in the surge of new specializations since 1964. The continual engagement of the Centers, together with the DCCU and the STCU, in university reform since mid-1968 has caused activities of curriculum development to suffer. Nevertheless, the procedures for proposing and introducing a new carrera are well defined.

It is far from simple to ascertain either national or regional needs. While regional needs may be apparent to every resident, they remain obscure when one attempts to transform them into curricular plans for certain career fields. National needs, if they are to be more than a summation of localized needs, depend upon the collective will of the Chilean people and their government. A demand for specialized manpower has been indicated at times by plans and commitments of the national government, but changing conditions have affected such demands adversely.

During most of the decade of the 1960s, the DEG and DCCU coordinators, along with the staffs of the University Centers, concentrated upon curriculum development, revision, and evaluation. Numerous seminars were organized for heads of carreras and faculty representatives to formulate or review objectives, plans of study, and individual courses. Consistently, work was done to improve the evaluation of student achievement and other phases of the educational program. Assistance and guidance were provided instructors in preparing work plans and examinations, developing criteria for evaluation, and reviewing the students' performance.

Commitments in writing and speech give a strong impression that the University Centers hold good teaching to be vitally important. Responses of instructors indicate a general subscription to modern methods of teaching. Teachers' use of a variety of instructional materials is less impressive, but dependence upon extraneous materials in many subjects is not the key to effective teaching. Furthermore, an austere budget sorely restricts the availability of teaching materials. Instructors also give students regular assignments to complete outside their classes, which emphasize required textbooks or groups of complementary books. Many instructors include group projects and oral presentations frequently among their assignments to students, and contrary to widespread opinion, little more than one-third of the instructors require students to study syllabi which the instructor has prepared. Evidently, too, instructors make little use of writing projects in their assignments. A large majority of the sampling of instructors observed that the general attitude in their respective Center was one of supporting or stimulating innovation in teaching.

From this high note it is well to realize that a large majority of instructors also registered dissatisfaction with many facilities and services of the university branches in the provinces. This unfavorable opinion extended to laboratories, audio-visual equipment, instructional materials, instructors' offices, classrooms, availability of teaching or technical assistants, and secretarial and clerical aid. A majority of teachers did consider the duplicating services to be satisfactory. Recognizing that problems are formidable in achieving a high level of satisfaction among instructors on these matters, it is still evident that much improvement is needed.

The libraries of the Centers can and should be a basic arm of the instructional program. The libraries vary considerably in number of volumes, but all are neat and orderly. They offer a good range of services and their procedures are systematic. Several have assistance from a special council, but others do not. This device might be an important means to secure closer relationships between the teaching staff and the librarians.

The number of volumes in a library is far less important than the quality and diversity of its collection in relation to the needs of the educational program. Prevalence of multiple textbook copies in several libraries indicate a need, but other means of obtaining such books should be explored. A notable deficiency of the Center libraries, with possibly one exception, is the lack of journals in specialized fields. Responses from instructors and librarians suggest strongly that they are ready and willing to strive for improvement.

CHAPTER 6

THE INSTRUCTORS OF THE UNIVERSITY CENTERS

During the first decade of the Regional Colleges a principal priority was given to staff development. Some emphasis in the early 1960s was placed upon the training of capable administrators to head the new institutions. Continually, however, the recruiting, preparation, and improvement of teachers has had major importance in plans of development.

THE CONCERN FOR SECURING QUALIFIED AND PROFESSIONALLY COMMITTED INSTRUCTORS

Emphasis on Teaching

The colegios regionales were designed for students who were far more heterogeneous in their backgrounds and abilities than those admitted to the university. The Regional Colleges included in their curricular planning segments of general education, training in the basic sciences, developmental study in language skills, preparation for middle-level careers, and studies preliminary to transfer to various faculties of the university. Teachers needed to understand and support these complementary programs and to have subject-matter and teaching competence in their specializations. The Regional Colleges were distinctively different from the university, with its self-contained faculties and its preoccupation with organized professional knowledge rather than with students. The concern in the Colleges for the guidance and maximum development of students called for teachers who understood and sought to work in a student-oriented environment. Good teaching demanded awareness and utilization of the community and its resources, and a fundamental desire for students to learn whatever was necessary to their fulfillment as professional persons in the Chilean society.

Instructors in the early 1960s

A generalization in 1964 about two groups of teachers in the Regional Colleges is still applicable:

> The staffs of the university colleges can be classified into general groupings: instructors who have graduated from the Teachers College of the University of Chile after five years of studies who are now responsible for the teaching of basic sciences and general

> education, and professionals who have graduated from other university schools, who are responsible for the teaching of technical or professional subjects corresponding to the terminal courses offered at the university colleges (U. de Chile, DEG, 1964, p.29).

Since Chilean universities offered little graduate work, and that which was given was not directed toward college teaching, the principal sources of professional teachers were the faculties of education in the universities.

Table 43 summarizes the kinds of training which Regional College teachers at Temuco, La Serena, and Antofagasta had received by 1964.

TABLE 43

Type of Training Received by Regional College Instructors, 1964

Training	Number	Percentage
Attended Advanced Training Course in Chile, with scholarships granted by the Department of General Studies	32	22
Graduate work in the U.S.A., with fellowships granted by the Department of General Studies	18	13
Graduate work abroad before teaching at the Regional Colleges	24	17
State-licensed secondary school teachers	19	13
Graduates from different university schools	50	35
Totals	143	100

Source: U. de Chile, DEG, Master Plan for the University Colleges, 1965-1970, p.30.

In addition to the 50 who had done graduate work in the United States or attended the special program of advanced training in Chile, 18 more were participating at that time in the latter project, and 14 fellows were currently engaged in graduate study in the United States. Participants in both groups had been selected as future teachers in the Regional Colleges. All 50 of the instructors who had completed their advanced studies were full-time teachers. This group constituted 35 percent of the 143 teachers and assistant-teachers who were employed in the three existing Colleges. Fifty of the 143 teachers and assistant-teachers, or 35 percent of the total, had graduated from professional university programs and were serving as part-time teachers in technical or professional subjects within the short-term carreras. This group included attorneys, architects, social workers, agronomists, and others.

Recruitment of Instructors for the University Centers

The University Centers' teaching staff is continually drawn from the same sources as when they were first established. Some come from the younger members of the staffs in the universities, especially the University of Chile; many are experienced secondary school teachers who are attracted by the opportunity to teach in another setting; and still others are recent graduates of the universities, most of whom complete the five-year carrera in secondary school teaching at the University of Chile. For the most part, the professionals in fields such as agronomy and medicine are part-time instructors who maintain an independent practice or are employed by governmental agencies in the community.

Previously, the University Centers and the coordinating agency in Santiago solicited the collaboration of departments and faculties at the University of Chile in Santiago for prospective teachers. Until 1966 the appropriate faculty was principally responsible for selection of instructors at the individual Centers. Then the university prescribed public competition to select administrators and teachers, and also provided for transfer of instructors between Centers (Decree No. 67, Jan. 1966). Recently an additional procedure has been introduced. On behalf of the University Centers in the provinces, which recommend to the rector employment of a candidate, the STCU announces the positions to be filled to the University Centers, the faculties and departments of the university, and the press. Announcements in the press include the requisites for the post, the teaching assignment or other responsibility, the salary, and any supplementary compensation. Ordinarily the announcement states a period, usually a week, during which application may be submitted because vacancies often do not occur until the prospective enrollments are indicated at the beginning of the academic year. This method of public announcement was adopted in order to maintain open competition for posts and to extend information about teaching positions to a maximum number of candidates. Each sede has its own committee for the selection of instructors. The STCU reviews the Centers' selections in order to verify compliance with university policies and governmental regulations concerning public employment. Finally, the rector formalizes the appointment.

Distribution of Full- and Part-time Instructors

Plans for the Regional Colleges had included a high proportion of full-time teachers on the staffs, prompted by the desire to have teachers committed to their profession. The distribution of full-time and part-time teachers in 1964 shows a heavy concentration of the former. Since 16 assistant teachers helped full-time teachers in laboratory work and other teaching activity, this number may be deducted from the total of 143. The balance of 127 teachers was divided into 94 full-time and 33 part-time teachers (U. de Chile, DEG, 1964, p.34). So, one year after the establishment at Antofagasta of the third Regional College, 73 percent of the teaching staff was full-time and 27 percent was part-time. This commitment to full-time instructors was unusual in an educational setting which had relatively few full-time professors at the postsecondary level.

Within the next two years, 1964-1966, five more regional campuses were established. Competition for teachers was intensified by growing enrollments in the secondary schools and universities, and by the establishment of new institutions of higher education. The increasing number of middle-level professional carreras also made inevitable a considerable demand for part-time teachers, inasmuch as full-time teachers were rarely obtainable in these fields. By 1966, the number of part-time teachers in the Regional Colleges exceeded that of full-time instructors (Table 44).

TABLE 44

Distribution of Instructors in
University Centers, 1966

University Centers	Full-time	Part-time	Total
Arica	16	27	43
Iquique	10	9	19
Antofagasta	18	50	68
La Serena	47	53	100
Talca	27	42	69
Ñuble	26	4	30
Temuco	51	83	134
Osorno[a]	20	30	50
Totals	215	298	513

Source: U. de Chile, Departamento Coordinador de Centros Universitarios, 1966 (typewritten document).

[a] Data reported as approximations.

During 1964-1966, the Regional Colleges absorbed 385 additional teachers, 121 who were full-time and 264 who were part-time. The proportion of full-time instructors had dropped from 73 percent in 1964 to 42 percent in 1966, while the part-time category increased from 27 percent to 58 percent of the total teaching staff employed by the Colleges. Reports from several Centers indicated that from 30 to nearly 50 percent of the instructors were *pedagogos*, state teachers who have university degrees qualifying them for teaching.

In 1969 the teaching staff of the University Centers had reached a total of 1,048. Of this number, 460 were full-time instructors and 588 were part-time (Table 45). From 1966-1969, the total teaching staff at the University Centers rose from 513 to 1,048, an increase of 104 percent within three years. A sustained program of recruitment was necessary in order to obtain the additional instructors.

TABLE 45

Distribution of Instructors in the University Centers, 1969[a]

University Centers	Number of Instructors		Percentage of Instructors	
	Full-time	Part-time	Full-time	Part-time
Arica	52	51	50.5	49.5
Iquique	24	17	58.5	41.5
Antofagasta	96	144	40.0	60.0
La Serena	57	89	39.0	61.0
Talca	61	113	35.1	64.9
Ñuble	57	38	60.0	40.0
Temuco	90	87	50.8	49.2
Osorno	23	49	31.9	68.1
All University Centers	460	588	43.9	56.1

Source: U. de Chile, STCU, preliminary data.
Calculations by author.

[a] Data do not include 133 individuals classified generally as assistants, technicians, or assistant teachers. Distributed among the eight Centers, this group consisted of 60 assistants (*ayudantes*) and auxiliary instructors (*auxiliares profesores*), 39 technicians (*agregados técnicos*), and 34 assistant teachers (*agregados docentes*).

The proportion of full-time teachers in 1969 was 43.9 percent of the Centers' teaching staff, a slight increase above 1966. The large majority of the full-time instructors were pedagogos with specializations in natural sciences, social sciences, mathematics, humanities, or languages. On the other hand, a substantial majority of part-time teachers were practicing professionals in law, medicine, nursing, agronomy, social work, and accounting. Data from the Center at Arica were illustrative of the general situation. There, approximately three-fourths of the full-time teachers had prepared themselves for a career of teaching. The large majority of this group were qualified as secondary school teachers, while a few were trained for elementary school teaching in the state normal schools. About one-third of the teaching staff were employed part-time at the Center. Among this group were agronomists, accountants, architects, medical surgeons, veterinarians, and specialists in music and art. It was extremely difficult, and even impossible in many cases, to obtain teachers from these professions. In some fields, including law and medicine, the professional practitioner was occasionally needed to teach only one or two specialized courses.

The use of professionals from the community may have several advantages to the Centers. Professionals facilitate closer relationships between the Center and its community; they can help the Center keep up-to-date in professional practices and **modify** courses of study in accord with current occupational and job specifications; or they may provide guidance and assistance in the organization of field experience for students and in the graduates' search for employment. Obviously these advantages are less likely to be fully realized if the part-time staff members must commute from Santiago one or two days a week in order to conduct their classes.

A further step may be taken to ascertain the approximate proportion of scheduled teaching that is done by the full-time teachers. Using the standard load of 16 hours of classroom teaching per week for a full-time assignment, the number of full-time instructors is multiplied by 16 to calculate the total number of hours taught by full-time instructors. This figure includes classes, laboratories, and occasionally, some field practice. Given the reported hours of teaching by part-time instructors in 1969, the percentage of classroom and laboratory hours taught by each group in the respective Centers was approximated. For the eight Centers combined, full-time instructors conducted approximately two-thirds of the scheduled hours of teaching (Table 46). The situation in most of the Centers resulted in a cluster of percentages around this figure, except that Talca and Ñuble fell well below the two-thirds mark.

TABLE 46

Percentage of Class Hours Taught, 1969

University Centers	Full-time Instructors	Part-time Instructors	Total
Arica	69.0	31.0	100
Iquique	82.6	17.4	100
Antofagasta	64.5	35.5	100
La Serena	69.7	30.3	100
Talca	54.5	45.5	100
Ñuble	73.8	26.2	100
Temuco	69.2	30.8	100
Osorno	58.8	41.2	100
All University Centers Combined	66.3	33.7	100

Source: Table 45 and U. de Chile, STCU.
Calculations by author.

TABLE 47

Full-time-equivalent Instructors in University Centers, 1969

University Centers	Number	Percentage of total in all Centers
Arica	75.4	10.9
Iquique	29.1	4.2
Antofagasta	148.7	21.4
La Serena	81.7	11.8
Talca	111.9	16.1
Ñuble	77.4	11.2
Temuco	130.1	18.8
Osorno	39.2	5.6
All University Centers Totals	693.5	100.0

Source: Table 45, and U. de Chile, STCU.
Calculations by author.

Staffing in Terms of Full-time-equivalent Instructors

In order to obtain a better comparison of the staffing at the eight regional campuses, the data for individual instructors may be refined into equated units of full-time-equivalent teachers. Each full-time instructor constitutes one full-time-equivalent instructor. For the purpose of obtaining the full-time-equivalents in the part-time teaching category, we may divide the total number of hours taught weekly, by the standard weekly load of 16 for a full-time instructor. The Center totals of full-time-equivalent instructors now provide a basis for comparing actual teaching staff time allocated to the various Centers (Table 47). The proportion of full-time-equivalent instructors and of enrollment in all Centers may not be even approximately the same in the respective Centers, of course, for Centers do vary somewhat in carreras and in assignments given to instructors. (See Chapter 10 for analysis of the relationship of staffing to enrollment.)

ACADEMIC PREPARATION AND EXPERIENCE OF CENTER INSTRUCTORS

Specialization and University Degrees

Complete information about all Center teachers was not available, but data were obtained from instructors responding to the interview-questionnaire of this study (see Appendix). The instructors could not be classified by departments since these had not been organized in some Centers at the time of the study. Table 48, grouping respondents by related specializations, indicates the range of training among the seven Center teaching staffs that participated in the study: Arica, Iquique, Antofagasta, La Serena, Talca, Ñuble, and Temuco. Of the sample of 112 instructors who were interviewed, 61 percent were men and 39 percent were women. Seventy-six percent of the group were married. Conservatively it may be said that the great majority of all instructors are within the range of 25 to 45 years of age.

Ninety percent of the responding instructors hold university degrees. Forty percent of degree-holders obtained degrees as state teachers, with subject specializations, in a five-year university program, thus meeting the legal requirement for teaching in the secondary schools. Degrees of other instructors were in agricultural engineering, chemistry, nursing, nutrition, obstetrics, psychology, and social work. A number of the remaining respondents had received university degrees in fields such as architecture, business, food technology, medical technology, law, medicine, and public administration. All but one of the degree holders were graduates from a Chilean university. Ten earned advanced degrees in other countries. Fourteen earned two or more university degrees. Ninety percent of the degree holders were graduated from the University of Chile, including seven who completed degree requirements at the Centers in the provinces. Only nine respondents have degrees from other Chilean universities.

TABLE 48

Specializations of Participating Instructors

Area and Specialization	Respondents Specialization	 Area
Natural sciences, mathematics, and related fields		44
Mathematics	10	
Chemistry	9	
Physics	2	
Biology	5	
Health studies: nursing, obstetrics, etc.	12	
Nutrition or food technology	5	
Electronics	1	
Social sciences and related fields		26
Individual social sciences, or combinations	15	
Social work	7	
Administration or accounting	4	
Languages		14
Spanish	3	
English	11	
Education and related fields		11
Education	8	
Home economics education	2	
Library science	1	
Agriculture	9	9
Others, including architecture, law, etc.	8	8
Totals	112	112

Only recently have universities in Chile begun to offer graduate studies in selected fields. Thus, advanced academic degrees are not common. Furthermore, the University of Chile still does not recognize in any formal manner, or within the professorial salary scale, the earning of an advanced degree. Nevertheless, instructors at the regional campuses do esteem opportunities to continue their studies. Nearly one-half of those interviewed reported that, aside from any study for a university degree, they had completed specific programs of study which had a duration of more than six months.

Teaching Experience

Since the life-span of the University Centers ranged from four to ten years at the time of the inquiry, it is apparent that the instructors' experience in the institutions could not be extensive. The respondents' periods of service in their respective branches are summarized in Table 49. The median period of service was 3.7 years, which suggests a reasonably high retention rate, especially since approximately three-fourths of the instructors were employed full-time. In five of the Centers the period of service could not have exceeded four years. The 50 respondents who had worked five or more years in their respective Centers therefore came from Temuco, La Serena, and Antofagasta. A review of the service years of all instructors at Arica tends to corroborate the sampling evidence that the retention rate for instructors is good.

TABLE 49

Duration of Teaching at University Centers

Years	Instructors Number	Instructors Percentage
0 - 2	20	18
3 - 4	42	37
5 - 6	26	23
7 - 8	12	11
9 - 10	12	11
Totals	112	100

The novelty of the Regional Centers, as well as the rural atmosphere of the provinces compared to the urbanism of Santiago, may well have had considerable appeal to prospective instructors. Since many Center instructors had lived originally in the central metropolitan area, those who remained in the provinces did apparently find advantages there to outweigh the cultural attractions and alternative employment opportunities which the capital city offered.

Instructors, on the average, had more than three years of teaching experience prior to their employment in the University Centers (Table 50). Since more than one-half of the group had one to eight years of experience, it may be estimated that a majority of the instructors are under 35 years of age. Approximately 80

TABLE 50

Total Teaching Experience of Center Instructors

Years	Instructors Number	 Percentage
1 - 4	26	23
5 - 8	35	31
9 - 12	20	18
13- 18	15	13
19- 25	13	12
26 or more	3	3
Totals	112	100

percent of the participating instructors taught prior to their employment in the University Centers, and 38 percent of them had university teaching experience (Table 51). Although detailed information about that experience is not available, it may be assumed that generally it was at the lower levels of professorial responsibility. For the young committed teacher in a rigidly structured university, the Regional Centers might have been a beacon. Too, for the first few years the DEG was authorized to offer a salary bonus to those who were willing to leave Santiago and go to the provinces.

TABLE 51

Levels of Teaching Experience Prior to Center Employment

Teaching Level	Percentage of Instructors[a]
University	38
Secondary School	52
Elementary School	4
Adult Education	5
None	20
Total	119

[a] Sample numbered 112. Twenty-five of the group had been teachers at two different levels, so that the percentages exceed 100.

Prior to arriving at the Centers, more than one-half had taught in the secondary schools. An adequate supply of qualified teachers for the Centers could not be drawn from university staffs since university professors are able to supplement their salary through private practice or other additional employment or by pursuing research in the university. As these activities yield considerable satisfaction and more professional prestige, few professors in the universities of Santiago, Valparaíso, and Concepción would be likely to accept employment in the Regional Centers. Full-time instructors generally could not be obtained from the ranks of professional specialists in the regions of the Centers or in the metropolitan area of Santiago. But experienced and able teachers in the secondary schools were interested in working at the Centers. In fact, educators in a few communities told me that the secondary schools had lost some of their best teachers to the local Centers.

Though the proportions are small, those with experience in the elementary school and adult education merit attention, because this is likely to be useful in providing in-service education (perfeccionamiento) to teachers and others in the community. Such experience may also augur alertness and competence in relating to the cultural needs of the community.

Twenty percent of the respondents did not teach before assuming their work in the Centers. Given proper training and orientation to the University Centers, the vigor and imagination of this minority could be a stimulus to the development and increasing effectiveness of the institutions, but without such training, these inexperienced teachers could lead the Centers toward a mediocre performance level.

Concurrent Employment Outside the Centers

Since it is commonplace in Chile, and other Latin American countries, for university professors and teachers to be employed concurrently in two or more institutions, this may also be expected from part-time teachers. For example, an attorney or agronomist in the community who teaches part-time in the university usually continues his regular professional practice. The real damage or loss occurs to the students and the institution when a full-time instructor obliges himself also to work elsewhere as a teacher or in any other capacity. This division of his energy and abilities inevitably reduces the contribution which he can make to his principal task. Admittedly, the stress of family needs, living costs, and salary deficiencies may virtually force a full-time instructor to seek additional employment. Certainly Chilean mores tend to prolong such practices. In order to have a better understanding of this situation, instructors were asked whether they had other employment outside the Centers (Table 52). Since 14 percent of the full-time instructors are employed outside the Center, a full-time appointment obviously does not always signify a full-time commitment to the institution. Rather, an instructor might be governed by the requirement that he spend 30 to 36 hours per week on the campus, depending upon the nature of his appointment. If one has a jornada completa (full time, complete working day) appointment, the university forbids any other employment.

TABLE 52

Concurrent Employment of Center Instructors

Other Employment	Instructors			
	Full-time		Part-time	
	(N)	(%)	(N)	(%)
Yes	12	14	21	81
No	74	86	5	19
Totals	86	100	26	100

CHARACTERISTICS OF THE INSTRUCTORS' EMPLOYMENT

Teaching Assignments

Seventy-one percent of the sample of instructors were teaching only in their specialties; the remainder were teaching their specialties and other subjects as well (Table 53). Little difference was evident between the responses of instructors who were heads of carreras or departments and those who were not.

Generally, instructors who teach in the program of general education are likely to be specialists in guidance or psychology, Spanish, English, literature, philosophy, the arts, or one or more of the social sciences. The basic sciences incorporate chemistry, physics, biology, and mathematics.

The number of courses which an instructor offers during a semester is one indicator of his work-load and of the preparation time which he must devote to his courses. Such information should be used cautiously, however, for work-load may vary with the subject, the method of teaching, the size of classes, facilities and materials available, and the experience of the teacher. Table 54 indicates

TABLE 53

Teaching Assignments

Center Curriculum	Instructors (%)[a]
General education	17
Basic sciences	14
Professional preparation	
In one carrera	56
In two or more carreras	33
Total	120

[a] Sample numbered 112. A number of instructors teach in at least two of the categories, consequently percentage total exceeds 100.

TABLE 54

Work Load, Second Semester, 1969

Number of Different Courses	Instructors (%)[a]
One	19
Two	33
Three	35
Four	10
Five or six	2
No reply	1
Total	100

[a] Sample numbered 112.

that more than two-thirds of the respondents were teaching two or three courses, each of which required separate preparation. Nearly one-fifth were teaching only one course, but even for part-time instructors this assignment ordinarily would signify teaching multiple sections of the same course. At least one instructor has publicly criticized the University Centers for not permitting specialization in teaching. He asserts that many times instructors must teach three or four subjects during the same semester and that, occasionally, they have assignments to teach more than 20 hours per week (Hernández, 1969, p.10).

In terms of teaching hours per week, the normal full-time work load in the University Centers is 16 hours, which includes lecture-discussion classes, laboratories, and supervised field work. Part-time instructors (profesores por horas) teach up to 16 hours per week. According to the University Centers' reports for 1969, the mean average load for part-time teachers was 6.3 hours per week (the average derived by the author from the Centers' reports of hours taught by part-time instructors, in data supplied by the STCU, 1970). The average at individual campuses ranged from more than four hours at La Serena to more than eight at Ñuble. Table 55 indicates that a large majority of full-time instructors in the sampling were teaching between 13 and 22 hours weekly.

TABLE 55

Weekly Teaching Hours, Second Semester, 1969

Hours per week	Full-time	Part-time	Total
1 - 6	1	3	4
7 - 12	9	19	28
13- 18	40	3	43
19- 24	22	1	23
25- 30	6	--	6
30 and more	8	--	8
Totals	86	26	112

Reports of full-time respondents in this study yielded an average teaching load of 16.95 hours per week, well in excess of the normal figure. Of the 37 instructors who were teaching more than 18 hours weekly, more than nine-tenths devoted one-half or more of their hourly load to the supervision of student field work. In fact, then, an hour of supervision of field practice often is considered in teaching assignments as somewhat less than an hour of classroom teaching. An individual instructor's teaching load may vary for the two semesters of the academic year. Substantially reduced loads, such as those of 10 respondents who were teaching less than 13 hours weekly, probably reflected allowances for other institutional services or special assignments during the semester.

Typically, part-time teachers were teaching between 7 and 12 hours per week, the median being approximately 9 hours weekly, well in excess of the 6.3 median hours for all part-time instructors in the Centers. This disparity may have resulted from the tendency to interview part-time instructors who had heavier loads because they were more likely to be available in the Centers, or perhaps less likely to be engaged full-time in some other occupation.

A few years ago full-time instructors in the Centers had teaching loads of 24 hours weekly, including 16 hours of lectures and laboratory teaching of day students, and 4 hours of teaching cultural and/or professional courses for evening students. The rest of their time up to 36 hours per week was allocated to activities related to their field and to work with the students, the Regional College, the community, and the Department of General Studies (U. de Chile, DEG, 1964, p.33). Except for the specification of four additional hours of evening teaching, the situation is still about the same. Instructors now receive additional compensation for teaching in the evening program. Instructors who have renta global (full-time) appointments are expected to be on the campus at least 30 hours per week. Those who have jornada completa appointments are due to be on campus at least 36 hours weekly. While records of attendance are maintained by the Centers, it is recognized that many of the professors do preparational and organizational work in their homes, and office facilities are sometimes not satisfactory for professional study.

Salaries

In recent years administrators and instructors of the centros universitarios in the provinces have asserted that teachers' salaries have been deplorably inadequate. In 1967 the Rector of the university appointed a commission to study the compensation of instructors in the Centers and the means for improving it. Members of the group included the director of the DCCU and the principal officers of the Federation of Instructors of the University Centers (U. de Chile, DCCU, 1967a, p.13). The federation in 1969 concentrated upon salary issues and problems arising from current limitations of the Centers' budgets. It is freely acknowledged in the Centers that a basic salary scale exists for all professional personnel of the University of Chile. A differentiation of salaries between Santiago and the provinces does result from the application of special allowances (personal communication).

The base salary for a full-time instructor was 17,616 escudos annually in 1969 (approximately equivalent to $1,680 U.S. at the official exchange rate in Santiago as of August 1969), for an eleven-month period beginning about March 1 and extending through part or all of January (U. de Chile, Departamento de Presupuesto y Finanzas, 1970). Instructors in the provinces share with those in Santiago the feasibility of full-time appointments, renta global and jornada completa, and also the respective increases after each three years of public service. The triennial differentials, in relation to the base salary, range from 40 percent after the first three years to 140 percent after 27 years of employment. Instructors in the University Centers receive a 7.63 percent increase, in relation to the basic salary, for holding a university degree, and a 7.5 percent addition for public employees. Given these extra allowances, the annual salary would be 20,281 escudos (approximately equivalent to $1,935 U.S. at that time). Aside from triennial increases, the salary for an instructor may be augmented further by zonal increments, which extend up to 40 percent of the base salary, depending upon the location of employment; a modest family allowance; or other increments in the form of allowances for transportation, recognition for assuming additional responsibility, or special incentives.

Owing to the Chilean government's 1970 readjustment of salaries and a vigorous demand for higher pay at the university, the base salary of a renta global instructor was increased 50 percent, to a total of 26,424 escudos (El Mercurio, April 12, 1970). A salary readjustment occurs annually in Chile and is based upon the increase of consumer prices during the preceding year. Inflation has prevailed in Chile for several decades so that these adjustments are deemed essential.

The situation of the University Centers in 1969 pointed to the hypothesis that salaries had been so low that recruiting and retention of instructors for the provinces had been extremely difficult. Even though data to test this hypothesis were neither sought nor obtained in this study, obviously it would have been extremely difficult for a young instructor and his family to do little more than subsist on his salary in the provinces. The university sometime ago discontinued the bonus that was payable during the early 1960s in order to encourage teachers from Santiago to go to the Regional Colleges in the outlying regions. Only recently was the economically advantageous category of jornada completa permitted in The Centers with funds of the regular university budget.

If full-time professors in Santiago teach 9 or fewer hours per week, the salary scale in Santiago is different from that prevailing in Centers where 16 hours per week is the standard. If higher salaries and lower teaching loads do exist in Santiago based upon certain criteria of performance or specificiations of employment, then the distinctions may be justified.[1] If the distinctions are the result of individualized actions, or variable and vague criteria, then a review of salaries and working conditions would be healthful for the entire university.

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[1] For information on personnel and personnel policies of the University of Chile, see U. de Chile, 1966, pp.72-80.

Competition for salary increments is severe. Now an instructor may present an appeal for review of his salary status, but in April 1970 a salary schedule based upon merit and achievement did not yet exist in the University Centers. The intention within university reform is to have such a system of promotion based only upon merit and achievement. Furthermore, a uniformity of grades and levels of those in academic work will be expected throughout the University of Chile (U. de Chile, Mesa Directiva, 1968, pp.33-34). The development of such a scale may well have a high priority during the period of reform. Certainly, a system for review of individual salary problems is consistent with the democratic principles espoused by the university community.

The magnitude of remunerations in the total university budget is sufficient in itself to warrant prompt action in the analysis and stabilization of equitable salary policies for all personnel. Salary schedules should provide economic incentives; allegedly, these are applied rarely in the Centers as recognition of any achievement beyond that of a single university degree or years of service.

At Chile's present stage of economic development, it would be extremely difficult to maintain salary schedules for professors and teachers which would enable them to support themselves and their families at a moderately comfortable level of living. Retirement benefits and health services are available to instructors, but they must pay a portion of their salary for the latter. It is common, if not absolutely necessary, for professors' and teachers' wives to work to supplement the family income. A change in this situation can come only as productivity and governmental revenues increase. (See Chapter 10 for further reference to the economic aspects of the University Centers.)

Responsibilities

According to the general regulations of the University Centers, instructors are expected to comply with the norms and directions concerning carreras, content of courses, methods, evaluation, guidance of students, and other matters of pedagogical significance. They also are to collaborate in pedagogical or other specified tasks. Furthermore, they are responsible for presenting to the coordinating agency in Santiago, through the administration of the respective Centers, suggestions of activities or projects that are conducive to the improvement of teaching in the University Centers (U. de Chile, DCCU, 1965b, Título IX, Art.38-41).

These regulations reflect the Centers' responsibility to the faculties in Santiago, and since the Centers are obligated to conform, it follows that instructors must do so. Such compliance, even with methodology, apparently leaves little room for individual dissent or experimentation. If internal differences arise, a struggle for power sometimes develops. Regulations probably are necessarily stringent, for few instructors have had previous experience in working full-time at one institution. It is certainly not unreasonable to specify job responsibilities. One complicating factor for the Centers is that, in Santiago, a senior professor is not subject to any authority.

Doubtless, these regulations will be reviewed and revised as the Centers delve further into the meaning of their sede status. One director declared that, in addition to teaching, instructors had the responsibility of maintaining regular office hours for consultations with students. Another director listed responsibilities such as the requirement to remain on campus, services of extension, research, preparation of classes, and assistance to the councils of the Center.

The instructors who were interviewed differed widely in conceptions of their duties. Given a list of several responsibilities they had other than teaching, as well as the opportunity to add their own, they responded yes or no (Table 56).

TABLE 56

Instructors' Views of Their Responsibilities
Other Than Teaching

Responsibilities	Instructors (%)	
	Yes	No
Participation in committees of the carrera or department	90	10
Regular office hours for consultations with students outside classes	75	25
Extension services to the community	56	44
Participation in committees of the Center	48	52
Projects of research and publication	47	53
Sponsorship or cooperation with students in extra-curricular activities	36	64

[a] Sample numbered 112.

High among the shared concerns of the colegios regionales were the full development of individual students and the offering of extension services to the community. Since sponsorship of students in extra-class activities is not customary in Chilean institutions, instructors may regard this activity separate from their duties. Nearly one-half of the part-time instructors acknowledged this as a responsibility, but only about one-third of the full-time group did so. More than four-fifths of the full-timers agreed that maintaining fixed office hours was one of their responsibilities. A majority of the part-time teachers reacted to the contrary. An arrangement of this kind is workable only if the instructors have an office, or share one that is not unduly congested.

Fifty-six percent of the instructors responded that extension services to the community are one aspect of their job, thus 44 percent thought otherwise. One-third of the full-time teachers were included in this minority, and four-fifths of the part-time group. These responses did not jibe well with those of more than 90 percent of the instructors who agreed that functions of the University Center included giving professional services to the community and serving as a cultural center. One explanation of the difference could be that many teachers consider some extension services too burdensome for them to carry on without additional compensation, even though they recognize that the Center is trying to offer such services to the community.

One of the great opportunities for national service is to raise the cultural level of communities and regions. (Chapter 9 describes the University Centers' services to the regions.) While it is not suggested that the Centers have failed in this effort, it is important that such a large proportion of the instructors do not accept the offering of extension services as their responsibility.

Exactly one-half of the full-time professors regarded research as one of their responsibilities. Research and publication activities were accepted as a responsibility by a substantial majority at Antofagasta, but were rejected in each instance by a considerable majority at La Serena and Talca. Such differences may exist because of variations in responsibilities at different Centers, or because of a lack of preparation for conducting research. At Antofagasta a receptive attitude probably has been fostered by the ongoing research in archaeology and oceanography. Certainly, the responses of instructors did not suggest reluctance to assume responsibility for research activity, provided conditions permitted them to do so. On the other hand, it cannot be assumed that teachers who were hired to teach now are prepared to conduct research.

The great majority of the sample assumed a responsibility to assist in their department's or carrera's deliberations or projects on programs, policies, and procedures. Inasmuch as less than half of the instructors expressed this point of view toward committees of the Center, apparently their professional identification is stronger within the departmental or carrera unit than within the Center itself. Carreras regularly have had examination committees, while the Centers have functioned administratively through a technical council. Except for campus politicians, who exist in Chile as well as in other countries, an individual instructor is likely to be more removed from local campus government than from the affairs of his department. With respect to committee service, full-time and part-time instructors indicated similar commitments. Differences among the Centers were marked with respect to serving on campus committees. The majority of respondents at Arica, Antofagasta, and La Serena rejected this activity as an instructor's responsibility (La Serena by 13-1), but at Temuco, Talca, and Ñuble a considerable majority of the respondents accepted the same activity as a responsibility.

Instructors were asked to indicate the extent to which they engaged in professional university work during student vacations. Fifty-one, or 46 percent, continued to work during vacations. Vacation-time activities which were mentioned most frequently included supervision of students' field experiences (prácticas), conducting extra classes, preparation and revision of courses, organization and administration of carreras, research projects, extension service, and teaching seasonal courses (cursos de temporada). Nearly one-fifth worked sometimes during vacations. No significant difference in practice appeared between full-time professors and part-time teachers. The University of Chile is closed completely during the month of February, so that any work by instructors during this period would be entirely of their own volition.

Availability of Assistants

A time-honored aspect of university teaching is that assistants, professional or student, facilitate more effective use of personnel. Preparation of laboratory experiments or demonstrations, supervision of laboratories, section discussions, attendance and grading records, assistance in preparation and evaluation of examinations and projects, and bibliographical work are among the tasks that assistants may perform, leaving regular instructors freer to devote themselves to more exacting and creative duties.

Four-tenths of the instructors were using assistants in 1969 (Table 57). As might be expected, a higher proportion of full-time

TABLE 57

Availability of Assistants

Reported Need	Instructors (%)[a]
Need assistants and have them	27
Need assistants and do not have them	48
Do not need assistants and have them	13
Do not need assistants and do not have them	9
No data	3
Total	100

[a] Sample numbered 112.

instructors had assistants than did part-time instructors. Both professional assistants and student assistants were employed, the latter more commonly. A majority of respondents at La Serena and Talca received services of assistants while a large majority at the five other Centers did not. Approximately two-thirds of the assistants worked from one to eight hours weekly, the mean being 5.6 hours. Three-fourths of the respondents reported their need for assistants, but little more than one-third of that group had them. Remarkably, 14 instructors who had assistants said that they did not need them. A total of 24 teachers, 22 percent of the sampling, stated that they did not need assistants.

A comparison of the stated need for assistants with their availability indicates that fulfillment of the need would require about an 80 percent increase in the total hours of employment. According to the respondents who needed assistants, the mean average requirement for an instructor's assistance would be 5.6 hours weekly--the same as that for assistants who were available to instructors at the time of the inquiry.

PROFESSIONAL ACTIVITIES AND PLANS OF INSTRUCTORS

Plans for Continuing Academic Careers

When asked whether or not they intended to continue a career as a university instructor, 90 percent of the group replied yes, 5 percent said no, and 4 respondents were undecided. The instructors were also asked whether they would continue to teach at the Center where they were employed. Except for one Center, where the yes and no replies were evenly divided, a substantial majority expressed a desire to remain. Eighty-one teachers (72 percent) answered yes, the balance of 31 (28 percent) said no. Within the latter group 27 were full-time instructors and only 4 were part-time staff members. It may be deduced that 20 of those who planned to continue in university-level teaching also planned to leave the campuses where they were employed.

The 31 instructors who did not plan to continue indefinitely at their particular Centers indicated that their reasons were personal, professional, and/or economic, most giving two or three reasons. Personal reasons, which very few instructors expressed, included a desire to change their place of residence, and a desire to live with their families. It is not unusual in Chile that a professional person works apart from his family, especially when his employment is obtained after the family residence has been established. Economic factors and lack of suitable housing in the place of employment often are reasons for such family separations. Salary level was frequently mentioned as a reason. Some instructors said that their salaries were low compared to other occupations; others said they were low in relation to those paid in other educational institutions. The professional reasons, as they are classified here, were related closely to economic conditions in the University Centers. Sixteen of the instructors, approximately one-half of those who did not plan to remain in their respective Centers, said that the economic limitations of the Centers did not permit them to obtain materials and equipment necessary to effective teaching. Nine instructors observed that the Centers offered little stimulus or incentive for staff members. Others commented that they wished to strengthen their professional competence through a program of improvement (perfeccionamiento), but the Center did not give them an opportunity to do so. Only two respondents said they were not interested in teaching. One mentioned politicization of the University as his reason for intending to leave.

Plans for Professional Development

Before summarizing plans of instructors for their own perfeccionamiento, a few facts about such activity may be drawn from university reports of 1967 (U. de Chile, Oficina de Plan., 1969b, p.235). A total of 33 instructors, from 7 of the University Centers, engaged in a program of additional study, and all but 4 received their salaries while on leave. More than two-thirds of the group were on leave for periods extending from 8 to 14 months; 22 went to the United States, 8 to Europe, and 3 to other areas.

Eighty percent of the sample group responded that they had long-range plans for improving their potential as instructors; 20 percent did not. As explained in the individual interviews, plans related mainly to location of developmental programs and to their objectives and content. Approximately one-third of the 89 who had long-range plans wanted to study in other countries; a few of these wanted to complete studies which they had begun abroad. Six of the respondents stated a preference for perfeccionamiento in Chile. Thirty-two declared that they preferred to participate in seminars either in Chile or in other countries, or they merely wished to participate in a program of perfeccionamiento without any location preference. A number of respondents mentioned the type of program in which they were most interested. These were, in the order of frequency: methods of teaching in their specializations, work experience, research, and problems of the regions.

Doubtless, many instructors would like to have the experience of living and studying abroad, and Chilean universities do not yet have highly developed programs of graduate study. However, for some instructors, advanced studies probably could be pursued most profitably in Chile. By obviating the need for competence in another language, in-country study probably would be advantageous for the majority.

The large majority of instructors were committed to improve themselves professionally; the replies suggest that the opportunity for perfeccionamiento is far more important than the location, form, or duration. Given the incentive of an institutional program on professional development, such as that introduced at the University of Chile in 1970, instructors in the University Centers would be more likely to plan carefully a program of self-improvement.

Advice, assistance, or consultations with university professors and professional specialists can be stimulating and helpful for specialized staffs in the Regional Centers. In view of the level of training of the large majority of the staff in the Centers, their attitude toward professional guidance (asesoría) is an indicator of their professional security and the depth of their desire to improve their professional competence. Any felt need for this kind of assistance may, of course, be affected by one's opinion of the quality and kind of assistance which might be available.

When asked if they had any asesoría in the teaching of their specialty, more than one-fifth of the respondents said that they did have such service. The remainder replied that they did not have it. Apparently it was clear to them that in the inquiry asesoría did not refer to assistance which might be given by a colleague in the Center.

The term was used positively to designate persons of recognized stature in their specialties or professions. It was also meant to indicate, as it normally does in Chile, that the recipient is the principal learner and the other is the advisor or consultant.

Responses of instructors indicated that they did not distinguish among the processes of perfeccionamiento, asesoría, and collaboration. The minority who were receiving asesoría reported that they were obtaining it by: coordination with specialists in the facultades of the university in Santiago; seminars and other forms of interchanging experience among professionals or teachers; work with a person of great experience; use of bibliographies and publications; contacts with professionals, their methods of work and their activities; consultation and advice on research in specialties; guidance from specialists discussing programs and problems of the specialties; graduate study in program of perfeccionamiento; and lectures, conferences, and visits with advisors and consultants.

It may be hoped that visiting consultants would agree to work as collaborators with the Center staffs, thus avoiding any sensitivity of the hosts concerning their own professional status. Special seminars and programs of graduate study may be more acceptable, however, because they are more structured and away from the home campus. Perhaps any concern over the form of assistance is not warranted, for 77 percent of the instructors asserted that they needed asesoría (Table 58).

TABLE 58

Instructors' Need for Professional Advice

Attitudes	Instructors (%)[a]
Need advice and presently have it	18
Need advice and presently do not have it	59
Do not need advice but presently have it	3
Do not need advice and do not have it	18
No data	2
Total	100

[a] Sample numbered 112.

When those who expressed the need for professional guidance described what they would like to receive, among the forms preferred were: seminars and other types of interchange with professionals;

cooperation among professors and among specialties, with the faculties in Santiago; asesoría in the specialization and the methods of teaching; and guidance from persons of major experience in the specialties. These may be a useful guide to those faculties of the university in Santiago trying to maintain programs with instructors in the Centers. For other faculties the desire for aid in the Centers may be a stimulus to plan appropriate programs of assistance or collaboration. It is important for professors in Santiago to visit the Centers, and those in the Centers to visit Santiago. If funds or professional contacts permit, Centers in the north and the south may well develop closer relationships in this manner with specialists in neighboring universities such as Austral, Concepción, and State Technical. It would be propitious to seek help from specialists at Valparaíso and at the Universidad Católica in Santiago, as well.

Participation in Professional Associations

Membership in professional associations does not necessarily signify active participation, but it does indicate a degree of professional interest extending beyond the local setting. Nearly three-fourths of the instructors declared that they were members of a professional association, most of them belonging to a national association. The remaining quarter were not members (Table 59). One-fourth of the respondents also said that they belonged to general job-related organizations within the University of Chile or the University of the North.

TABLE 59

Instructors' Professional Memberships

Organization	Instructors (%)[a]
National professional associations	53
Regional professional organizations	14
International professional associations	7
None	26
Total	100

[a] Sample numbered 111.

PROGRAMS FOR THE DEVELOPMENT OF INSTRUCTORS

Besides stringently selecting candidates who could be effective in the programs of the Regional Colleges, it was necessary for the

DEG and the Colleges to prepare them for service in predetermined roles. Up-grading was essential for teaching, administration, and guidance. The greater portion of the 1961 Ford Foundation grant was allocated for fellowships for prospective staff members to study abroad, and for a program of staff training in Chile. The University of Chile and the Center for Research and Development in Higher Education (CRDHE), University of California, Berkeley, had entered into a cooperative agreement for planning and coordinating the training programs and other phases of aid and technical assistance to the Regional Colleges.

Leland Medsker, now Director of CRDHE at Berkeley and an active participant in the emergence of the University Centers during their first ten years, commented in 1962 on the training of teachers for those institutions:

> As in the case of junior colleges in the United States it is believed that the teacher for the regional college should be one with a specialization in his subject field but one whose interests and abilities lie in teaching at the beginning college level and not necessarily in research activities. The able graduate of the normal five-year program of the University of Chile or other Chilean universities with successful teaching experience or, if without experience, the product of a special training program such as the one described above, should make an acceptable teacher for the regional college. . . . One point is certain: the faculty members in the regional colleges must be of the highest possible calibre. The success of the regional college venture depends upon the quality of teaching (Medsker, 1962).

Irma Sálas, director of the DEG of the University of Chile, wrote to Harry Wilhelm of the Ford Foundation (August 12, 1963) that training of administrators and counselors ". . .will help us to better carry out the philosophy of our junior college system." The Master Plan for the Regional Colleges describes the training program as:

> . . .a scholarship system and a plan of advanced studies under the tutorship of professors of the different departments of the Faculty of Philosophy and Education. . . .
>
> The program of advanced training for university college teachers in Chile includes the fields of biology, chemistry, mathematics, physics, and the social sciences.

> The program abroad also covers scientific subjects and the social sciences, as well as training for administration, technical, and guidance personnel of the university colleges, including specialists in the Department of General Studies (U. de Chile, DEG, 1964, p.27).

Advanced Training Program in Chile

In order to prepare a program of advanced training in Chile, the DEG solicited and obtained the collaboration of different departments of the Faculty of Philosophy and Education.[2] Owing to the pressing need for teachers of basic sciences, the DEG sought first the assistance of the department of mathematical and natural sciences. According to the cooperative plan which emerged, the department in the faculty agreed to advise the DEG on the following subjects: (1) needs of teachers in the sciences constituting part of various Center carreras; (2) minimum preparation and other requisites of candidacy for training scholarships; (3) study of the qualifications of candidates; (4) selection of the trainees; (5) diagnosis of preparation of the trainees to recommend a plan of studies for each participant; (6) designation of tutors for each trainee; and (7) review of the progress of the trainees.

Four categories were designated as those who might benefit from the training program in the University of Chile: teachers in the Centers who had not had sufficient experience in university teaching; licensed teachers who were employed in the secondary schools and recommended by the Faculty of Philosophy and Education; graduates of the faculty with little or no experience in secondary education, but recommended by departments of the faculty; and, in special cases, professionals who were teaching in the Centers but were not trained teachers.

For the first program in 1962, candidates were required to have a university degree as a state teacher (credential for teaching in the secondary schools) with specialization in one of the sciences, or a professional degree in some scientific subject, as well as suitable teaching experience. The competition for traineeships was announced in the press during December 1961 and January 1962, and by bulletins to the university schools. The director of the DEG, the head of the department of mathematical and natural sciences, and the chiefs of its various sections met frequently to consider the qualifications of the 39 applicants before final choices were made.

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[2] Calderón (1969) has been used extensively as a source in this description of the advanced training program in Chile.

In the following years of the program the university degree was discontinued as prerequisite for candidacy because many students in their last year of study were well prepared in their respective subjects. The department of philosophy and letters collaborated in the selection process in 1963 to choose some trainees in humanistic studies. Subsequently, in 1964, it was decided to limit selections to students in their last year and to recent graduates. The science department had concluded that the teaching of sciences had changed so radically in recent years that only these younger groups would be able to advance themselves as trainees to the level required in the University Centers. As a result of this decision, no announcement of openings was made in the press. Departments of the Faculty of Philosophy and Education were informed of the program and heads of the subject sections recommended students for the program. Thereafter, the pattern of review, interviews, and selections remained about the same. Final selections were made by the DEG, with the approval of advisory professors from the Faculty of Philosophy and Education.

Then, during 1965 and 1966, an advisory committee from the department of sciences, of the Faculty of Philosophy and Education, participated with the director of the DEG in the selection of the trainees. In this manner those responsible for the program participated regularly in the selection process. During those two years attention was given to the selection of trainees who had more teaching experience than the previous groups. In fact, in 1966 some Centers recommended a change of criteria because they needed more experienced and mature teachers than those of past years. Again a press announcement was made, but this time only holders of university degrees who had teaching experience could apply if they were not more than 35 years of age. These details themselves are important only insofar as they indicate the flexibility with which the DEG and the cooperating departments in the Faculty of Philosophy and Education approached the selection of trainees.

For each trainee, the tutor (or advisor) would develop a plan of study designed for the individual's preparation and interests, the characteristics of his specialty, and the needs of the carreras within the Centers. Each trainee developed some teaching activities as an assistant instructor under his tutor's supervision. Usually the entire training program was completed within the Faculty of Philosophy and Education; in special cases trainees studied in other faculties. As a complementary service to the trainees, the coordinator of the program, within the DEG and later the DCCU, was available regularly for consultation with participants about the program itself, their training and their problems, and their future involvement with the University Centers.

As a result of the expansion of the Centers and an increasing need for science teachers, a substantial modification in the training program was attempted in 1965 at Temuco and La Serena. Teachers in these two Centers had considerable experience and many had completed the advanced training program in Chile or the scholarship program abroad. The trainees were appointed as assistants in the two Centers, the campuses thus financing this part of the training from their own budgets. Each trainee worked under the supervision of an instructor at the respective Center. During the months of July and January, when classes were not in session, the trainees gained practical experiences in the Faculty of Philosophy and Education at Santiago and completed studies and work in teaching methodology and practical problems of the Centers, under the direction of the DCCU. Actually, only seven trainees engaged in this modified program, for the instructors concluded that laboratories and facilities were not adequate for preparing more trainees satisfactorily.

Several additional features added considerably to the annual training program. Trainees participated in a seminar one afternoon a week for a semester on the Centers, given by the staff of the DCCU, to familiarize trainees with the objectives, characteristics, organization, curriculum, guidance services, teaching, and other aspects of the Regional Centers. The seminar was complemented by visits to several Centers. During the first three years of the advanced training programs the DEG financed weekly English lessons for the trainees. The department was unable to continue this support but recommended that the trainees study English at their own expense, so that they could use publications in English.

Arrangements with the trainees were formalized by an agreement in which the DEG, on behalf of the univeristy, would pay a fixed monthly amount for 11 months for living costs, or an amount equal to the recipient's regular income, and would appoint the trainee as a full-time instructor at a salary no lower than a stated amount the following academic year. On his part, the trainee agreed to complete the plan of study as developed, to accept the supervision of the tutor-professor who was assigned to him, and to dedicate himself exclusively to his studies no less than 36 hours per week. Furthermore, the trainee committed himself to work at least five years in the Regional Colleges.

The advanced training program in Chile was developed from 1962 through 1966, with 12 to 23 participants annually. Arrangements and selections varied according to the Centers' requirements. Each year the directors of the Centers and the DCCU reviewed the Centers' needs and the feasibility of their instructors' participating in the program. Annual programs lasted from 10 to 12 months; sometimes this period was extended if the trainee had not completed his plan of study or reached a sufficiently high level of preparation. Extension was also permitted in a few cases when the university was unable to appoint the trainee as an instructor upon the completion of his program.

A number of the university faculties cooperated in offering programs of training for prospective Regional Center instructors. Several departments of the Faculty of Philosophy and Education collaborated with the DEG and the DCCU; the Faculty of Medicine participated in the preparation of biology instructors; prospective chemistry instructors attended some classes in the Faculty of Chemistry and Pharmacy; and the Faculty of Architecture cooperated in the preparation of several teachers of the social sciences. Quite possibly these early forms of cooperation were fertile seeds for subsequent collaboration between these faculties and the University Centers. All trainees completing one of the four successive annual programs from 1962 through 1965 joined the teaching staffs of the University Centers. At the end of the 1966 program, 7 of the 13 participants became instructors in the provinces.

This advanced training program contributed substantially to the organization of suitable teaching staffs in the Regional Colleges. It is remarkable that 90 out of 91 trainees completed their respective programs. Ninety-two percent of all trainees were employed in the Centers after completing the annual programs of 1962-1966 (Table 60). In 1970, 68 percent of the trainees still were engaged in the Regional Centers (personal communication, Coordinating Professor Guillermina Calderón, STCU, Santiago, July 1970). Temuco, La Serena, and Antofagasta, founded in that sequence from 1960 to 1963, received a majority of the trainee-graduates. The Talca Center, founded in 1965, drew more than a dozen trainee-graduates, partly because of its nearness to Santiago and because the municipality of Talca helped finance the advanced training of new instructors. Some financial aid also came from the municipality of Osorno. The distribution of specializations within the training programs shows that the results were consistent with original intentions. Seventy-nine participants (87 percent) concentrated on biology, chemistry, physics, or mathematics (Table 61). It seems conservative to conclude that the training program in Chile contributed much toward the development of good teaching of the sciences in the Regional Centers.

Owing to a number of circumstances in 1967, the advanced training program was discontinued. The Coordinating Department for the University Centers had replaced the DEG, and the office of the rector was then directly in charge of employment of instructors, the new DCCU serving merely as a coordinating agency without authority.

TABLE 60

Advanced Training Programs, 1962-1966

Results	Trainees (N)
Admitted to programs, 1962-1966	91
Completed programs	90
Employed at Centers upon completion of programs	84
Not employed at Centers upon completion of programs	7
did not complete program. 1	
employed by University of Chile, Santiago. 3	
completed program and resigned for family and health reasons. 2	
continued studies in Europe . . . 1	
Employed at Centers, 1970	62

More importantly, budgetary difficulties of the Centers in employing new teachers increased during this period. Even though the regular annual training program was discontinued, interest in perfeccionamiento persisted among instructors at the regional campuses. The DCCU offered a seminar on action research October 22-November 1, 1967, to instructors at the Arica Center, and instruction and demonstrations were given on audio-visual methods (U. de Chile, DCCU, 1968a, p.2).

TABLE 61

Specializations in Advanced Training Programs, 1962-1966

Specialization	Trainees (N)	Trainees (%)
Biology	21	23
Chemistry	22	24
Physics	15	17
Mathematics	21	23
Other[a]	12	13
Totals	91	100

[a] Includes 3 in social sciences, 2 in history, 2 each in Spanish and English, and 1 each in geography, philosophy, and French.

University reform activities and prevailing attitudes in the Centers during 1968 and 1969 resulted in minimal contact between them and the DCCU or the STCU, making seminars and other advanced training programs unfeasible. The immediate future of programs of perfeccionamiento appeared more auspicious in 1970. Rector Boeninger announced that the annual budget of the university provided 1,500,000 escudos (approximately $130,000 U.S.) for professional development of instructors in the provinces (El Mercurio, Jan. 31, 1970).

Programs of Advanced Studies Abroad

Staff development through fellowships for advanced studies abroad was regarded by the Chileans to be so important in the University of Chile-University of California Project for the Regional Colleges that nearly one-half of the original 1961 grant was allocated for that purpose. When the Ford Foundation granted an additional $770,000 in 1965 for the furtherance of the Regional Centers, more than half of the funds were budgeted for graduate fellowships, which were intended to prepare a nucleus of full-time instructors in selected fields of study. The earlier University of Chile request for assistance stated:

> In the last analysis, the quality and consequent success of the junior college program will depend primarily on the caliber and experience of the professors. In Chile, however, there is at the present time a severe shortage of qualified personnel available for full-time assignment within the regional colleges. It is proposed, therefore, that a select group of staff members be sent abroad for substantive training at the advanced level in particular disciplines, as well as for training in the organization and teaching of courses. These persons, who would be guaranteed assignments upon their return from abroad, would be used to form the nucleus of the teaching staffs in the following areas: biology, chemistry, physics, mathematics, geography and history, sociology and political science (U. de Chile, 1961b, p.6).

When the fellowship program in the United States was introduced in March 1962, the DEG again sought the collaboration of the departments of the Faculty of Philosophy and Education in order to organize a program for selecting candidates for the fellowships.[3] The heads of the various departments generally recommended teachers who had recently graduated, for only they presumably had satisfactory training in contemporary science. Prospective candidates presented academic records, degree certificates, professional references from professors and employers, and personal data. They also completed an examination in English given by the Chilean-North American Cultural Institute in Santiago. Candidates after 1963 had to present, with their other documents, the English Proficiency Examination Certificate.

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[3] This description of the fellowship program in the U.S. draws heavily from reports and interviews of Ramón Sepúlveda, Coordinator, Secretaría Técnica de Centros Universitarios, U. de Chile, Santiago.

The selection process included examination of the documents, individual interviews by the coordinator of the program and the director of the DEG. Successful fellowship candidates were told in interviews and writing about features of the program in Chile and in the United States, including (1) the purposes and characteristics of the Regional Colleges (for those candidates who had not been employed with them); (2) the courses which they were scheduled to teach upon returning from the United States and/or their responsibilities as guidance workers, academic advisors, or administrators; (3) the requirements that university study in the United States imposes upon a student's time, efforts, and abilities; (4) the courses or types of courses they should take in the United States in order to prepare for their future roles in the Regional Colleges; (5) the advisability of obtaining the master's degree, even though this advanced degree was never really a requirement of the program; and (6) their obligations toward the Department of General Studies in Chile, and the Institute for International Education in the United States.

During the first two years fellowship recipients included fourteen teachers at the Regional Colleges, a coordinator in the DEG, four university professors and one assistant instructor, an official in the Institute of Education of the University of Chile, two secondary school teachers, two school counselors, a civil service employee, a technician in the electronics industry, two graduates from the Faculty of Agronomy of the University of Chile, and three graduates from the Regional Colleges' advanced training program for teachers in Santiago.

The University of California, as a cooperating institution in the Chilean project, had arranged for the Institute for International Education (IIE) to provide preliminary orientation and placement of the recipients in universities suitable for their needs, and to administer the financial aspects of the program. For many recipients the institute also scheduled intensive study of English prior to their beginning advanced study in their specializations. In 1963 the DEG reported that it had been very difficult to select grantees of high academic ability who also had sufficient competence in

English to carry on graduate study in the United States (U. de Chile, DEG, 1963a, p.17).

While in the United States, the recipients were expected to report their academic progress regularly to the DEG. The department also corresponded with IIE, and occasionally with faculty advisors, about the progress and problems of the graduate fellows, who, in turn, agreed to inform the DEG and the IIE of their professional and personal problems. When the fellows arrived in the United States, CRDHE at the University of California, communicated with them, corresponded as necessary with faculty advisors, obtained academic reports from the fellows, and wrote to the DEG on matters of mutual interest in the fellowship program. The CRDHE authorized any special funding of the grantees, including extensions of the periods of study, and arranged and authorized expenditures for field visits to junior colleges and technical institutes.

The coordinating agencies functioned cooperatively and well, considering the separations by time and distance. The DEG and its successor bodies the DCCU and STCU functioned with zealous regard for the fellows and the University Centers, and IIE fulfilled its responsibilities well. On its part, CRDHE respected the interests of the University of Chile in advancing its Regional Colleges, and maintained a constant regard for the welfare and academic achievement of fellows in the program. Although arrangements gave the Chilean fellows reasonable assurance of attention to their needs, nevertheless, confusion and uncertainty were not uncommon among them. Communications and related procedures were not sufficiently standardized to avoid overlapping concerns and to overcome the problems inherent in shifting supervisory personnel.

Fellowship awards included allowances for departure arrangements, international travel, living costs in the United States of the recipient and spouse, university fees and supplies, health insurance, and travel in the United States, including field visits to selected colleges. On their part, the fellows agreed to teach in the Regional Colleges for the five years following their studies abroad. In later years the awards usually were supplemented by a continuation of the fellows' salaries during their absence. Often this was accomplished by colleagues' assuming a fellow's assignment without any compensation themselves; it was hoped that such cooperative efforts eventually would benefit all instructors.

For several years CRDHE and IIE cooperated in organizing a program of orientation for the year's group of graduate fellows a few months after their arrival in the United States. Generally, it was believed that orientation at that time was more beneficial than crowding such a program upon Chileans who had just come to the country. For the 1967 newcomers CRDHE decided to postpone the orientation sessions until the spring of 1968, assuming that after about nine months in the United States, the graduate fellows would be more at ease in the environment and would have far less concern about their competence in English.

The 1968 orientation program was held April 30-May 3 in New York City, with 10 of the 12 fellows then in the United States attending. The sessions were oriented to various features of the junior colleges in the United States. Fellows were cautioned against any desire for a cross-cultural transfer of the U.S. junior college to Chile, but they were encouraged to examine the U.S. models in relation to the Regional Colleges of Chile to better understand the characteristics and problems of their own institutions. Other phases of the orientation conference included visits to community colleges and an exchange of comments on the fellowship program (Melone, 1968).

During 1962-1969 the University of Chile awarded a total of 68 fellowships for advanced study abroad. This was the only regular program of its kind in the University Centers during the 1960s.[4] Forty-seven participants were men, 21 were women. Grantees studied in 25 different institutions of higher education. Approximately one-half of the group were under 30 years of age, and the preponderant majority were under 40. (These age data are derived from reported ages of the first 32 grantees in the program.)

More than 50 percent of the fellows concentrated in the natural sciences and related fields, while more than one-third studied in various fields of education (Table 62). Fellows generally were encouraged to study for the master's degree. Until recently, little attention was given to any degrees except those related to professions (the first-level degrees after study from 2 to 7 years). The first emphasis in the fellowship program in Chile was the desire to prepare highly competent teachers for employment in the Regional Centers. In U.S. universities it is usually very difficult to be admitted to graduate study without a commitment to an advanced degree. Probably, completion of requirements for a master's degree is not always consistent with objectives to develop teachers who would be effective in Chile. Nor does a master's degree bring professional prestige in the University of Chile, even though holders of such degrees are far from common. The university does not recognize it officially by promotion, salary increase, or change of assignment. Ordinarily, fellows who earned a master's degree

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[4] In 1967 seven Centers individually approved study abroad for at least 30 teachers and generally paid their salaries during leave periods, usually from 8 to 14 months (U. de Chile, Oficina de Plan., 1969b, pp.209-220).

TABLE 62

Specializations in Fellowship Program Abroad, 1962-1969

Area and Specialization	Fellows		
	Number		Percentage
	Specialization	Area	
Natural Sciences		36	53
Biological sciences	11		
Physical sciences	11		
Mathematics	5		
Other fields[a]	9		
Social Sciences	3	3	4
Education and Related		23	
Administration of higher education	5		
Educational administration	5		
Guidance and counseling	9		
Other[b]	4		
Other[c]	6	6	9
Totals	68	68	100

[a] Included 3 in natural or general science, 2 each in food science and industrial technology, and 1 each in nursing and electronics.

[b] Included 3 in education and 1 in educational sociology.

[c] Included 2 in library science and 1 each in English, psychology, English and higher education, and special studies.

returned to their previous position in Chile. However, a large majority of the fellows included a master's degree in their program objectives, and 51 participants were awarded a Master of Arts or a Master of Science degree.

Since the major purpose of the fellowship program abroad was to strengthen the competence of instructors in the University Centers, it was pertinent to inquire about results (Table 63). Even though benchmarks are lacking, a completion rate of 94 percent is impressive for this type of program. Of the four who failed to complete their programs, three did finish at least one semester of study; the remaining one completed all requirements for a master's degree except the final written project. Only 2 of the 64 completing an approved program did not return to Chile. In 1970, seven years after the first fellows returned from their advanced study abroad, three-fourths of the original recipients were still employed in the University Centers or the STCU. One was the STCU director and four were coordinators of specialized services in the Technical Secretariate. Eleven others were engaged in other sections of the University of Chile or in another Chilean university. Thus, the loss of fellows to the University Centers has been minor, especially in view of the socioeconomic

TABLE 63

Results of Fellowship Program Abroad, 1962-1969

	Fellows	
	(N)	(%)
Total number of fellowships	68	100
Recipients who completed approved program[a]	64	94
Recipients who worked in University Centers program after completing advanced studies in U.S.[b]	62	91
Status of Fellowship Recipients, 1970:		
Employed in the University Centers program of the University of Chile	51	75
In the University Centers	46	
In Technical Secretariate of the University Centers	5	
Employed in Chilean universities (excluding Centers' program)	11	16
Others, including 4 married women who reside outside of Chile	6	9

[a] All fellowship recipients had terminated their studies by the end of 1969.

[b] Includes those in the University Centers and in DEG, DCCU, and/or STCU.

TABLE 64

Employment in Centers of Returning Fellows, 1970[a]

Center	Number
Arica	1
Iquique	0
Antofagasta	6
La Serena	16
Talca	5
Ñuble	6
Temuco	10
Osorno	2
Total	46

[a] Including 6 instructors on approved leaves of absence.

situation of the instructors in the provinces and the strain of the recent years of university reform activities.

Seven of the eight Centers shared in the contributions made by returning fellows. The campuses at La Serena and Temuco employed 42 percent of the returning fellowship holders (Table 64). A number of fellows were appointed or elected to important administrative posts in six of the Centers. Three were elected director, two in 1969; three have served as sub-director; three have been secretary-general; two have served as coordinator of studies; two as coordinator of guidance; and four who specialized in administration of higher education have held administrative posts for many years.

SUMMARY

In the development of the Regional Centers, credence has been given to the idea that their quality and success would depend principally on the caliber and experience of the instructors. Teachers were needed who were interested in students, responsive and resilient to change, willing to venture, and competent in their teaching fields. Many novel characteristics were present in the Centers including general education and basic sciences for all students in all carreras, guidance services, and intermediate-level carreras. Since the campuses were established instructors in the University Centers have tended to group themselves in the areas of general education, sciences and mathematics, and the carreras. Teachers in general education and the sciences commonly have completed a five-year university program preparing them for secondary school teaching in a specific field. Teachers in specialized courses of the carreras usually are university-trained professionals in their respective fields; many teach part-time and practice their professions in the community. The large majority of the teaching staff graduated from the University of Chile, and a considerable number were in advanced seminars or completed other specialized studies beyond their first university degree. Since programs of graduate study have developed only recently in Chile, opportunity for advanced study has been sought in foreign universities as well as in Chilean institutions.

The sample of instructors indicated that four-fifths of the instructors had taught for three or more years in their Centers; approximately three-fourths had taught for five or more years in the Centers and in other institutions, mainly at the secondary and university levels; and about one-fifth had not taught prior to their Center employment. In 1969 44 percent of all instructors were teaching full-time, and nearly two-thirds of class hours in 1969 were taught by full-time instructors. The majority of instructors teach only in their specialty; more than one-fourth teach other subjects as well. The average teaching load appears to be nearly 17 hours weekly. The majority of those teaching 18 or more hours weekly were engaged, to some extent, in supervising students' field work.

Instructors were divided nearly evenly between those teaching 1 or 2 different courses, and those teaching 3 or more. Fourteen percent of the responding full-time instructors were also employed outside the Center, and, naturally, the majority of part-time instructors were so employed. Substantial salary increases granted by 1970 law marked a major improvement in earnings compared to 1969, although the cost-of-living portion of the adjustments occurred after the instructors had been bearing substantially higher living costs over a considerable period of time.

The majority of instructors evidently have aspirations for their future academic development. The opportunity for perfeccionamiento has more significance to instructors than the form, duration, or location of the developmental program. Considerable interest was expressed in advanced study abroad or in Chile. Similarly, most instructors desired advice and collaboration from specialists, although such assistance is available to only about a fifth of them. Nine-tenths of the respondents expected to stay in academic work, nearly three-fourths of the sample wished to continue as instructors in their Centers. Of those not intending to remain in their Centers, low salaries, limitations of material and equipment, little stimulus or incentive offered to staff, lack of housing, and the desire to live with their families were cited as their reasons for leaving. All these factors relate to the financial support available to the Centers and, consequently, financing feasible in the Chilean society.

The University Centers are fully aware of the importance of professional development opportunities for instructors. Two specially funded programs merit attention because of their extended duration and their high measure of productivity. The first, the program of advanced training in Chile, was conducted mainly in several departments of the Faculty of Philosophy and Education. Emphasis was placed upon recruiting teachers in the sciences; 90 of the 91 trainees completed the individualized training programs lasting from 10 to 12 months. The DEG and the DCCU in Santiago and the officials of the University Centers engaged intensively in these training programs. In 1970, four years after the completion of the last annual program, more than two-thirds of all participants were still employed by the Centers.

The fellowships for advanced study abroad continued from 1962 to 1969. Fellows completed graduate studies in 25 different U.S.

institutions, a majority of them specializing in mathematics, biology, chemistry, or physics. About one-third completed studies in education, counseling, or related fields, and three-fourths of the 68 fellows earned master's degrees. An indication of the success of this program is that three-fourths of the fellows were employed at the University Centers or with STCU in Santiago in 1970.

CHAPTER 7

STUDENTS OF THE UNIVERSITY CENTERS

The Regional Colleges were designed to extend improved educational opportunities to youth in the provinces. A growing population and an intensified interest in the furtherance of elementary and secondary education were conducive to augmenting higher education services in the northern and southern areas of Chile, while a concentration of facilities in Santiago was a disadvantage to young men and women outside the metropolitan area.

What are the socioeconomic characteristics of these students? What are the policies and processes of selection for admission to the Centers and to the respective carreras? To what extent do students who are admitted continue their educational programs?

SOCIOECONOMIC BACKGROUND AND CHARACTERISTICS

Age

The age distribution of students in the Regional Centers is similar to that in most institutions of higher education. At Arica in 1969 the median student was 21.5 years; ages ranged from 17 to 43, but were concentrated between 19 and 22 years (U. de Chile, Arica, 1969). At La Serena the median age of first-year students in 1969 was 20.3 years (U. de Chile, La Serena, 1969).

Marital Status

A small minority of students are married; 10.3 percent of day and evening students at Arica in 1969, 4 percent of the first-year students at La Serena. However, these proportions are high enough to warrant consideration in the guidance services, financial aids programs, and plans for student housing at the Centers (see Chapter 2 for sex distribution of students).

Geographic Origin

The geographic origin of students reflects the extent to which the educational services reached students in the immediate locality, the local province, and other regions of the country (Table 65). It is not surprising that nearly three-fourths of the students in the entire University of Chile, including the eight Centers, had their family homes in the immediate locality. The majority of

TABLE 65

Permanent Family Residences of Students, 1967

University of Chile Campuses	Immediate Locality of Campus (%)	Outside Locality of Campus(%)	Total[a]
Arica	74.0	26.0	100.0
Iquique	91.7	8.3	100.0
Antofagasta[b]	56.6	43.4	100.0
La Serena	54.8	45.2	100.0
Talca	38.9	61.1	100.0
Ñuble	n.a	n.a	---
Temuco[c]	39.0	61.0	100.0
Osorno	43.0	57.0	100.0
All Centers combined	48.3	51.7	100.0
University of Chile	73.6	26.4	100.0

Sources: U. de Chile, Instituto de Investigaciones Estadísticas, *Boletín Estadístico de la Universidad de Chile*, Vol. X, No. 1, 1966, p.135 Vol. X, No. 2, 1967, pp.145-149.

[a] Data based upon responses from the great majority of students, 5,015 from the Centers and 21,839 from the University of Chile as a whole.

[b] Data include reports from the Pedagogical Institute and the School of Social Work in that city.

[c] Data are for 1966.

students are enrolled at Santiago and Valparaíso. For the majority of students in Centers south of Santiago, their permanent residences were outside the communities where their Centers were located. In the North the population is concentrated in a few urban communities; in the South it is more widely dispersed in the service areas of the Centers. Some of the students do commute by bus or automobile from other localities in order to attend the Regional Centers. But whether they commute, or live during the academic year in the Center communities, these students from other areas merit consideration concerning housing, transportation, health, and financial assistance.

In the absence of any officially designated service areas, the regions which the respective Centers serve may be identified with those named by the National Office of Planning (ODEPLAN, 1968b, p.52). Except for the regions including Santiago, Valparaíso and vicinity, and the sparsely populated areas in the most southern region of Chile, each of the designated regions contains a Regional Center of the University of Chile. Table 66 presents the percentage of Center students who in 1967 came from each service region. The table also shows an outward movement of some students leaving homes in Santiago to attend Centers in the provinces.

TABLE 66

Center Students with Family Residences in Service Regions, Santiago, or Other Provinces, 1967, in percentages

Center	Service Regions	Santiago	Other Provinces	Total
Arica	83.7	7.5	8.8	100.0
Iquique	93.6	2.9	3.5	100.0
Antofagasta[a]	75.2	2.9	21.9	100.0
La Serena	79.6	12.6	7.8	100.0
Talca	77.8	8.7	13.5	100.0
Ñuble	n.a	n.a	n.a	n.a
Temuco[b]	59.1	2.9	38.0	100.0
Osorno	61.9	2.4	35.7	100.0
All Centers	73.8	6.3	19.9	100.0

Sources: U. de Chile, Instituto de Investigaciones Estadísticas, *Boletín Estadístico de la Universidad de Chile*, Vol. X, No. 1, 1966, p.142, and Vol. X, No. 2, 1967, pp.150-156.

[a] Data from the Pedagogical Institute and the School of Social Work not included.

[b] Data are for 1966.

If the Temuco Center service zone were expanded to include the nearby provinces of Bío-Bío, Malleco, and Valdivia, the proportion of students from the zone would rise to 75.2 percent. If the service region of the Osorno Center were regarded as containing the southern provinces of Llanquihue, Chiloé, Aisén, and Magallanes, the proportion would rise to 94.1 percent. Similarly, the percentage at Antofagasta would increase to 92.8 percent if the nearby provinces were added to its service area. These and the other Centers have been offering educational opportunities mainly to students in the provinces.

The introduction of a national university admissions program in 1968 evidently has resulted in some shifts in the geographical distribution of family residences of students at the Regional Centers. Even though data are preliminary, a trend is apparent. In 1969 the Center at Arica experienced a substantial decline in the proportion of students from its service zone, and a considerable increase of students from Santiago. A similar tendency was evident at La Serena and at Talca in 1969. Preliminary 1970 data from several Centers indicated an increasing dispersion in the geographic origin of students (STCU internal reports, 1970). The trend is toward a reduced proportion of entering students from the service regions and a higher proportion from Santiago. At Talca, for example, only 42 percent of the first-year students gave the local service area as their permanent address. Since the large first-year class has a major effect upon the figures for the local campus, this drop indicates a substantial decrease in the proportion of local students. At Talca and other Centers increases were registered mainly from the central metropolitan region of Santiago, although moderate percentage increases from northern and southern provinces outside the respective service zones were shown.

During the years immediately ahead it will be well for the Centers to study carefully the geographic origins of students and the effect of prevailing trends upon educational opportunities, programs of higher education, and private and social costs. It would be regrettable if the original purpose of serving regional needs for higher education should be subverted by admitting increasing proportions of students from Santiago and other parts of Chile.

If certain Centers were to concentrate upon selected carreras, in order to minimize duplication among them, students might be drawn from all parts of Chile. While regional needs should be respected, the maturity and development of the region might in fact be stimulated by some cross-fertilization of ideas and experiences among students from all parts of Chile.

The increasing number of graduates from secondary schools places more and more pressure upon the capacities of institutions of higher education. Since a large part of the school population is in the metropolitan area, it is inevitable that graduates there seek educational opportunity at the higher level wherever it exists. In the long run it would be more economical, and certainly educationally desirable, to augment the offering especially of short-term carreras in Santiago.

Types of Secondary Schools Attended

Most Center students are graduated from public secondary schools. Among first-year students at the eight campuses in 1967, 76.9 percent had completed public schools, 23.1 percent private schools (U. de Chile, DCCU, 1968a, p.40). Most of the former attended those schools preparatory for the university. A small minority went to vocational secondary schools which train for jobs in commerce, teaching, agriculture, technology, or industry. At La Serena 89.3 percent of the first-year 1969 students came from the general secondary schools, 10.7 percent from vocational schools (U. de Chile, La Serena, 1969). Chile's current emphasis upon the development of a four-year secondary school curriculum, with some specialization in the latter part of the program, is not likely to affect seriously the distribution of sources of students for the Regional Centers.

Even though much progress has been made in recent years toward making secondary schools available to Chilean youngsters, it is still common for higher income families to send their children to the cities, especially Santiago, for secondary school. For example, in 1969 at Arica, 15.2 percent were graduated from secondary schools in Santiago, but only 12.8 percent reported that their family residence was in the capital city.

Socioeconomic Level

The students at the Regional Centers are drawn from a lower socioeconomic level than those at the university in Santiago. In a recent study of Chilean social stratification and higher education, Jarry (1968) found that socioeconomic strata--determined by parental income, occupation, and education--of students in Santiago and in the provinces varied considerably (Table 67). Smaller proportions from the University Centers fell into the upper and middle categories compared to students in Santiago. The patterns of socioeconomic levels for men and for women were not significantly different.

TABLE 67

Socioeconomic Levels of Students

University of Chile	High(%)	Middle(%)	Low(%)	Total(%)
University Centers	5.7	53.1	41.2	100.0
Santiago	11.5	72.8	15.7	100.0

Source: Roberto Jarry Richardson, Estratificación Social y Educación Superior en Chile, Oficina de Planificación, Junta Nacional de Auxilio Escolar y Becas, 1968, p.65.

Jarry's findings are similar to those of the student welfare service of the University of Chile which studied the socioeconomic composition of the university's students at all campuses in 1966

(U. de Chile, Oficina de Plan., 1969a, p.59). The service found that 37 percent of the students in the Regional Centers and 16 percent at Santiago were members of families in the lower socioeconomic level. Similarly, a much higher proportion of students' families in the provinces had very low incomes, compared to those in Santiago, and a relatively small proportion had incomes at the higher levels (U. de Chile, Boletín, 1967, p.12). These findings confirm earlier preliminary evidence (U. de Chile, DEG, 1964, p.49) that the student population of the Centers is more widely distributed among families from all social and economic strata than that of the university in Santiago. By offering opportunities to a higher proportion of students from low-income families, the campuses in the provinces are contributing to social mobility and individual development.

Educational Attainment of Parents

The rising level of educational expectations and opportunities in Chile are conducive to higher educational attainment. Parents in Chile, as elsewhere, prefer that their children have as much or more schooling than they had. Judging from the sampling of University Center parents in this study, their children are moving farther up the educational ladder than they did. Only two mothers and five fathers among 66 sets of parents had attended a university, and only two mothers and two fathers had obtained a university degree. Table 68 indicates that the highest level of education reached by approximately two-thirds of the mothers and fathers was the secondary school. About one-fifth of the mothers and more than one-fourth of the fathers completed secondary school, an equivalent of 12 years of schooling, and then discontinued their formal education.

The child's educational advancement may be affected by the educational attainment of one or both parents. In 17 percent of the sample of Regional Center parents, both parents attained no more than attendance or completion of elementary school. More than one-half of all sets of the Regional Center parents, 53 percent, reached no farther than study or graduation from a secondary school. These figures indicate that students at the Regional Centers are advancing considerably farther in school than did their parents.

The Office of Planning of the University of Chile reports a similar educational pattern of heads of families of the university's students (U. de Chile, Oficina de Plan., 1969a, p.54). This study, completed in 1966, shows that 26.9 percent of the heads of families of University Center students had completed no more than elementary schooling, and that 15.3 percent had studied at the university level.

TABLE 68

Educational Attainment of Parents of Center Students

Highest Level	Numbers		Percentage	
	Mothers	Fathers	Mothers	Fathers
No schooling	0	2	0	3
Elementary school, incomplete	5	5	8	8
Elementary school, complete	14	9	21	14
Secondary school, incomplete	27	22	41	33
Commercial or technical secondary school, incomplete	5	4	8	6
Secondary school, complete	8	10	12	15
Commercial or technical secondary school, complete	5	7	8	11
University, incomplete	0	3	0	4
University, complete	2	2	3	3
Not known	--	2	—	3
Totals	66	66	101[a]	100

[a] Total results from rounding of numbers.

By contrast, more than 40 percent of the heads of families of the university's students at Santiago had studied in a university, and only 6.8 percent had schooling limited to the elementary level. The majority of the heads of families in the provinces and in Santiago had studied in the secondary school and not advanced to the university. Expressed differently, the heads of families of Center students had completed an average of 9.8 years of schooling, while those in Santiago reached an average of 12.7 years of education.

Occupation and Employment of Parents

Nearly two-thirds of the fathers and more than one-fourth of the mothers of University Center students were employed (Tables 69, 70, and 71). Of the 49 mothers who were not employed, all but one were known to be housewives and homemakers; the 13 fathers who were not employed were retired.

The minority of mothers who were working outside the home were engaged in a range of occupations: professionals, technicians, office workers, merchants and salesmen, and laborers. For the fathers, the

TABLE 69

Employment of Parents of Center Students

Employment	Numbers		Percentage	
	Mothers	Fathers	Mothers	Fathers
Employed or self-employed	17	42	26	64
Not employed	49	13	74	20
Not known or deceased	--	11	--	16
Totals	66	66	100	100

TABLE 70

Occupations of Mothers of Center Students[a]

Occupation	Number	Percentage
Professionals and technicians	6	9
Public officials and business managers	1	1.5
Office personnel	4	6
Merchants and vendors	4	6
Service workers	—	—
Production and non-agricultural laborers	2	3
Homemakers (dueñas de casa)	48	73
Not known	1	1.5
Totals	66	100.0

[a] The categories of occupations are those used by the Instituto de Investigaciones, Universidad de Chile, Santiago. The classification is derived from the International Labor Office.

concentrations of production workers, office personnel, and professionals and technicians were heavier.

Data from the University of Chile in 1967 on 33,376 parents, including 6,274 from the provinces, is summarized in Table 72. A consistent pattern of substantial differences between the Regional Center data and the report for the entire university (including Regional Centers) appears in the results for professionals and technicians, public officials and business managers, farmers and

TABLE 71

Occupations of Fathers of Center Students

Occupation	Number	Percentage
Professionals and technicians	10	15
Public officials and business managers	3	4
Office personnel	12	18
Merchants and vendors	9	14
Service workers	6	9
Farmers and fishermen	2	3
Production workers and nonagricultural laborers	13	20
Members of Armed forces	4	6
Not known[a]	7	11
Totals	66	100

[a] Even though the father was retired or deceased, his principal occupation was included in the data whenever such information was available.

TABLE 72

Occupations of Parents of Students in the Centers and the University of Chile, 1967

Occupation	Fathers(%)		Mothers(%)	
	University Centers	University of Chile	University Centers	University of Chile
Professionals and technicians	12.4	26.5	4.8	9.2
Public officials and business managers	5.0	8.9	.6	.8
Office employees	27.3	25.8	3.3	5.3
Merchants and vendors	20.8	20.2	3.8	3.1
Service workers	3.7	2.1	1.4	.9
Farmers, fishermen, etc.	10.9	6.6	.3	.3
Production workers and non-agricultural laborers	18.5	8.7	1.4	1.2
Members of armed forces	1.4	1.2	—	—
Homemakers	—	—	84.4	79.2
Totals	100.0	100.0	100.0	100.0

Source: Universidad de Chile, Instituto de Investigaciones Estadísticas, *Boletín Estadístico de la Universidad de Chile*, Vol. X, No. 2, 1967, pp.164-168.

fishermen, and production workers and nonagricultural laborers. In the University Centers as a group, as in each of the six reporting Centers, the proportions of fathers in the last two categories were considerably higher than for the fathers of students at all university campuses. Conversely, the Regional Center percentages were substantially below those of the university as a whole for professionals and technicians, and public officials and business managers. In two of the larger groupings, office workers and merchants and vendors, little variation is evident between the parents in the University Centers and in all of the university. Data from Temuco, the largest of the University Centers, were not available for 1967. The Temuco report in 1966 did show in most categories a pattern of occupational distribution similar to that of the other Centers. Principal variations reflected the economic emphasis of the region. At Temuco, as at Talca and Osorno, a proportionately heavy concentration was apparent in the farming and extractive occupations, and a relatively low proportion was reported for the grouping of production workers and nonagricultural laborers. Data were not reported by the Ñuble Center, which began to function in 1967.

Sources of Finances for Students

In spite of the considerable differences in the socioeconomic data about students and parents in the University Centers and in the University of Chile as a whole, the proportionate emphasis upon various sources of student financing in the Regional Centers is much the same as in the entire university. A slightly higher percentage of Center students obtained loans or scholarships from the university and other sources (Table 73). In general, financial assistance includes food and lodging, as well as other basic living expenses.

Forty-two percent of the respondents in this study reported that financial assistance came from two or more sources. Nevertheless, more than two-thirds of the day students reported that they were financed in their studies exclusively by their parents or relatives.

Living Expenses and Fees

An inquiry in 1970 by the student welfare service (servicio bienestar estudiantíl) of the university at Santiago was designed to secure information about the expenditures for housing, food, and other items. Upon the basis of responses from six Centers, the average monthly expenditures of an individual student were approximately 787 escudos (about $65.00 U.S. in February 1970); the range was

TABLE 73

Students' Sources of Financial Aid, 1967,
by Percentage of Students Reporting

Sources	University Centers	University of Chile
Parents	71.2	71.5
Other relatives	4.0	2.6
Spouse	2.5	2.3
Scholarship or loan		
University of Chile	3.3	3.0
National Board for Student Aid and Scholarships	--[a]	.1
Other	2.9	2.3
Employment		
Related to study	5.4	8.6
Not related to study	9.1	8.3
Other source	.7	.6
Several sources	.9	.7
Totals	100.0	100.0
	3,950	21,243

Source: U. de Chile, Instituto de Investigaciones Estadísticas, *Boletín Estadístico de la Universidad de Chile*, Vol. X, No. 2, 1967, pp.156-160.

[a] No aid was reported from this source.

630 to 900 escudos in the different communities where Centers are located. These data were collected as part of an attempt to establish a basic budget, or "salary," necessary for a university student. Students contribute a small portion of the income necessary to support higher education in Chile (Chapter 10). Traditionally, higher education has been virtually free from fees. An individual student's standard fees for 1969 in the University Centers were: matriculation, 60 escudos; laboratory and teaching materials fees, 80-100; medical and dental fee, 65; total, 205-225 escudos yearly ($23-25 U.S.). In addition to standard fees, students contributed 90 or more escudos to a general scholarship fund for students needing aid. A high proportion of students are exempted from fees and scholarship contributions by the student welfare service.

SOCIOECONOMIC SERVICES AND CONDITIONS FOR STUDENTS

The Student Welfare Service

The service of student welfare in the University of Chile and in each of the Regional Centers is principally concerned with the financial status, living expenses, and economic needs of students. Its services include, in order of importance, housing for students, food, physical and mental health, recreation, and employment (U. de Chile, Boletín, 1967, pp.12-14). Most of the Centers have only one full-time social worker, who is coordinator of the service, so that activities necessarily vary with the needs and problems on each campus.

Many instructors evidently are conscientiously aware of these services extended to students. Instructors were asked, "During the past year to what extent have you recommended that a student consult the social welfare service?" Thirty-one percent responded, "Many times"; 42 percent, "A few times"; and 26 percent replied, "Never." During the period of university reform, when the Centers have sought maximum independence, coordination of these services has been largely suspended. Such coordination, when it does come, should extend to the whole package of welfare services in the various campuses of the university. Currently, coordination of the Centers in the provinces extends mainly to a university program of loans and establishment of standards for medical services.

Organized Financial Aid

Loans are the characteristic form of organized financial aid since scholarships as awards or gifts are not available. Three forms of loans are offered to students who qualify: (1) those from the National Board for Student Aid and Scholarships, (Junta Nacional de Auxilio Escolar y Becas--JNAEB); (2) those from the University of Chile; and (3) those from special funds of several individual Centers. The JNAEB was created by Chilean law in 1964 in order to assist needy students at all levels of the educational system.

Each of the loans in Table 74 represents a series of monthly loans during the academic year to an individual student. The JNAEB loans, which comprise the great majority, are 250, 300, 350, or 450 escudos monthly, depending upon the individual situation. Given the estimated monthly average expenditures per student, a JNAEB loan cannot cover all expenses. The University of Chile common fund loans are 260, 310, or 450 escudos each month. The students' fund (Solidaridad) loans range from 150 to 400 escudos monthly. The amount of an individual loan depends upon the individual student's economic position, which is ascertained by the student welfare service in the respective Centers. Social workers consult students and sometimes visit their homes to talk with parents in order to determine their ability to help the student.

TABLE 74

Sources of Loans to Center Students, 1970

University Centers	JNAEB	University of Chile Common Fund	Students' Fund	Total
Arica	160	6	48	214
Iquique	52	--	5	57
Antofagasta	416	22	17	455
La Serena	360	11	--	371
Talca	571	7	43	621
Ñuble	295	2	44	341
Temuco	594	14	28	636
Osorno	122	2	9	133
Totals[a]	2,570	64	194	2,828

Source: U. de Chile, Servicio Bienestar Estudiantil.

[a] Data do not include emergency loans or loans from funds of the Centers.

Funds for the JNAEB program are provided by the national government. Loans from the University of Chile common fund are financed from matriculation fees, and those from the students' fund are made possible by student donations upon matriculating at the institutions. A number of the Regional Centers have special funds which are used to grant loans to students. Funds for this service come from the copper industry tax (Ley del Cobre de Antofagasta) and from donations of various agencies such as the Council for the Progress of Arica (Junta del Adelanto de Arica), the municipality of Osorno, National Health Service, National Corporation for Development (CORFO), Rotary Clubs, private foundations and business groups, and the League for the Protection of Students.

The growth and magnitude of the JNAEB program has been impressive. As a result of the JNAEB program, the Regional Centers, individually and collectively, have aided a steadily increasing number of students each year since 1965. Recipients of its loans in 1967 constituted 11.3 percent of the students in the Centers (U. de Chile, DCCU, 1968d, pp.88-89). The discrepancy between this item and that of Table 73, which shows no evidence of JNAEB loans to University Center students, probably resulted from problems of securing complete reports from the individual students responding to the university's inquiry. Nearly two-thirds of those who applied for JNAEB loans were successful, and many of the other applicants obtained loans from other sources. The information for 1970 (Table 74) indicates that JNAEB loans were extended to more than one-fourth of the students in the Regional Centers during that year.

JNAEB loans are designed to cover costs of required textbooks, clothing and study materials, and basic living expenses. In the administration offices of the university in Santiago applications are reviewed and recommendations are forwarded to JNAEB. Recipients receive and utilize the funds through savings accounts. The student begins to repay the loan a year after his graduation by contract. Repayment period tends to be from six to ten years, the maximum being 15 years. If repayment cannot be completed within the specified period, the borrower may apply for an extension. (See Chapter 10 for a discussion of financial support of the Centers and certain implications for students.)

Employment

Notwithstanding the poor economic position of many students, only a small percentage of them work while attending the Regional Centers. Partial data at several of them suggest that the proportion of day students who are employed ranges from 3 percent to slightly more than 10 percent. A recent survey did show that 19.3 percent of students in the University of Chile at Santiago were employed (U. de Chile, Oficina de Plan., 1969a, p.51), the majority working part time. Part time or occasional employment for students is not usually available in Chile, especially in the smaller cities outside the central zone. The student's extensive class schedule does not usually permit taking advantage of any employment opportunity. Generally, attending the university is a full-time assignment for day students; free time is usually given to other activities. Evening students in the provinces are expected to be employed, or otherwise occupied, during the day.

Housing

During the 1966 academic year nearly one-half of the students at the Regional Centers lived away from their immediate families, but a substantial majority lived with parents, relatives, or friends of the family (Table 75). Most students in Santiago lived with their parents. Nearly 30 percent of the students in the provinces lived in boarding or rooming houses, while only about 3 percent lived in such facilities in Santiago. In the provinces, those who do not have family-related accomodations have access only to expensive and scarce facilities. Institutionally sponsored student residences in the provinces are scarce because financial resources and investment

TABLE 75

Comparison of Students' Residences During Academic Year, 1966

Place of Residence	University of Chile (%) Santiago	University of Chile (%) University Centers
With parents	78.6	51.0
With relatives	6.5	11.6
With spouse	6.0	2.7
House of other person	.7	3.8
University residence	2.1	0
Private home	1.5	0
Boarding house or residence	3.1	29.6
Institutions	0	1.3
Alone	1.5	0
Totals	100.0	100.0

Source: U. de Chile, Oficina de Plan., *Antecedentes e Informaciones Universitarias*, Volumen 1, No. 1, 1969, p.49.

planning are lacking for their construction, and the need for them has become apparent only within recent years.

Student residences in Chile present problems of social organization and political action since supervision and integration of residence halls within the institutional program are not familiar operations in Latin America. Nevertheless, several of the Centers (Arica, Antofagasta, Talca, and Temuco) each reported that they supervise a student residence accommodating a small number of occupants (Department of Student Welfare, University of Chile, Santiago, internal report, 1970).

Health Services

To a considerable extent the health program depends upon the arrangements which the Center, through its coordinator of student welfare services, can make with the National Health Service in its own community. Most Centers provide an annual physical examination for all students. A number of the branches have contracts for medical services to students during specific hours of the week. In general, specialists are available at little cost to students, but this service again depends upon the specialists available in the local hospital. Hospital services are severely limited. At one campus it was reported that the local hospital does attend the student, although no formal agreement exists. At other campuses, a social worker in the student welfare service solicits free service from the hospital, as needed, or seeks emergency service and tries to obtain necessary funds for payment. At two of the Centers a dentist serves students through a contract, whereby funds for medical services are used for reimbursement. Two other Centers have been successful in arranging with dentists in the community to provide services at reduced rates.

Food Service at University Centers

Since a number of the Regional Centers have locations on the outskirts of the community, or several kilometers from it, food service is even more important than would normally be the case at comparable institutions in central locations. Chilean custom is to go home for luncheon, which is the principal meal of the day. As one feature of an attempt in 1970 to establish priorities for planning, the university's student welfare service obtained from the Regional Centers information about their food-service facilities (casinos). Snacks or meals are served at modest prices at most Centers, but facilities vary greatly. Capacity of the casinos ranges from 50 to 150 persons. I know from personal experience that the casinos are an important socializing influence among the professional staff and the students throughout the day.

GUIDANCE, ADMISSION, AND RELATED SUBJECTS

The Guidance Service

The introduction of guidance services was one of the original objectives in preparing plans for the Regional Colleges. Guidance services were considered essential to serve properly a heterogeneous student population with a considerable proportion of low-income families. Such services in the early 1960s were not available in other higher education institutions in Chile, nor were they given more than bare recognition in the secondary schools (Platt, Loeb, and Davis, 1964, p.33). Some change is apparent a decade later as more professional guidance workers may be found in larger secondary schools. They still are not common in the universities, even though some programs are offered to prepare professional counselors. The need for guidance services has been recognized in the program for reform of the University of Chile (U. de Chile, Mesa Directiva, 1968, p.26).

As an innovation in Chilean higher education, the guidance programs of the Regional Centers have been, in most cases, a sustained and central part of their total program. Events and conflicts during the university reform period of 1968-1970 resulted in some deterioration of guidance services, particularly because a number of positions formerly allocated for this purpose were not utilized, but the service nevertheless continues to be one of the most impressive features of the Centers' activities.

Guidance and admission are interrelated activities at the Centers, with emphasis being given to informing, diagnosing, counseling, and retaining students. Even though a national university admissions program resulted in substantial modification of the testing and diagnostic activities of the Centers, students are still assisted in selecting a carrera. For several years, departments of occupational information were fostered in various Centers to obtain information about employment opportunities for carrera graduates. However, these departments did not function as placement services for graduates. During 1968-1969, the Technical Secretariate of the University Centers did attempt to secure and coordinate the use of occupational information, but the program was short-lived. The need for continued intensive work in this field is important to the Centers' students and graduates, as well as to curriculum planning. (See Chapter 8 for a discussion of the employment of graduates).

At the end of 1969 the eight Regional Centers employed 19 professional guidance workers; this ratio of one worker to 490 students is well below the original goal of one for every 200 students. Each Center had from one to four guidance workers. Functions of the guidance services are reported in the following order of importance: individual guidance in the Center, procedures of admission, pre-university guidance, classes in guidance or orientation to university studies, and group guidance. Guidance workers at all Centers are involved in individual guidance and admission activities; staff members in the majority of Centers also visit secondary schools in the region to inform students about procedures and policies for admission to the university, the possible choices of specializations, and the educational program of the Centers. This information is reinforced for first-year students, and others, by brochures, explanations to various groups, orientation courses, and specific information to individual students.

The kinds of student problems which the service responds to are generally academic, personal, vocational, or financial. Academic problems of achievement, satisfaction, and attendance are the most common. Students in the provinces have different degrees of involvement in their studies. Some study hard, but many do not; a number of them focus upon their political activities rather than academic pursuits; some are more easily motivated than others; and some need a higher degree of teacher empathy than others.

Support of the guidance service (servicio de orientación) by the instructors and administrators varies considerably from one campus to another. The extent of involvement was suggested by instructors' responses to the question, "During the past year to what extent have you recommended that a student consult the guidance service?" Forty-one percent of the respondents replied, "Many times"; 37 percent, "A few times"; and 22 percent, "Never." The range and content of diagnostic and informational output is a further indication of the concern for guidance services. Study guides, cumulative student record forms, and other documents on admissions, testing, and career specializations have been developed under the leadership of Emma Salas, in the STCU. Numerous items have been prepared for students' use, and others for the professional staff.

Students and instructors have both been affected by the controversies and aspirations of the university reform activities, and concentration upon academic goals has been difficult. The concomitant resistance to coordination from Santiago, at least for a time, probably has affected adherence to policies of evaluation and other matters. To combat communication problems during the early period of university reform, guidance workers in STCU and the Regional Centers organized themselves as a National Association of University Guidance Workers. Meeting periodically to examine common problems, review procedures, and plan future activities, this group may well become the nucleus of an enlarged national association for guidance and counseling.

Personality Research on First-year Students

In a developing country such as Chile, one well may wonder about the probable impact upon students of educational institutions and practices which are at variance from those prevailing in the still traditional environment. Vicente Sánchez, professor of psychology of personality at the University of Chile, and Patricio Saavedra, a consulting psychologist at the university's Institute of Administration, recently completed a study of first-year students in the eight University Centers. A New York Times report referred to the Centers as "United States-sponsored colleges" (Raymont, 1969). The study was designed to analyze the personality and characteristics of first-year students in the Regional Centers and was sponsored by the Coordinating Department of the University Centers (U. de Chile, DCCU, 1969). It was anticipated that results of the study would be useful in improving guidance services and other aspects of the Centers.

The researchers concluded that a high percentage of students in the Centers were experiencing personality problems, compared to students in the more traditional curriculum of the University of

Chile in Santiago. Students had seemed to have acute difficulties with their parents and other authority figures as a result of being subjected to a clash between their traditional values and those being advanced in the allegedly foreign-model institutions (Sánchez and Saavedra, 1968; Sánchez, Asún, and Saavedra, 1969). Such a clash of values would certainly have implications for guidance and instruction, as well as educational development in Chile.

The Regional Centers were conceived, planned, and developed as Chilean institutions rather than a transplantation of the North American community junior college, although the original Colleges shared some of the features of the community college, such as concerns for individual students, service to the community, and interest in good teaching. But they also had characteristics which reflected the Chilean setting, such as regulation by the university, requirements of the carreras, and intensive scheduling of class and laboratory sessions. Even though the Regional Centers have striven to introduce new ideas into Chilean higher education, and to serve in some measure as catalysts for socioeconomic change and development, they can hardly be regarded as imports. They are not merely the result of foreign aid or international agencies, of cooperation with a foreign university, or of advanced study in other countries of a number of Chilean instructors and administrators. The authority of cultural attitudes in Chile and the integrity and competence of Chilean professionals preclude any stereotyped imitation of a foreign model.

With respect to the intercultural conflicts of the students reported by Sánchez and Saavedra, a study of first-year students unavoidably reflects personality characteristics and attitudes which the subjects bring with them to the institution. The internal conflicts which the Chilean researchers detected in their study did not necessarily emerge with admission to the Regional Centers. Second, resistance to authority is virtually a basic attribute of contemporary youth throughout most of the world, not merely in the Chilean Centers. Third, the cause-and-effect relationship between the alleged cultural clash and the students' personality conflicts was not proven in the study; evidence is insufficient to establish that such a cultural clash existed or, if it did, that it was the cause of the presumably high incidence of personality conflict among students. Fourth, the forces of social change and intercultural influences are everywhere at hand, in Chile and elsewhere, so that such influences can hardly be ascribed only to the Regional Centers. Whenever new technologies and ideas appear, a conflict of values occurs, and any fundamental social change is based partly upon a change of values. Finally, in the absence of paired groups in Santiago and in the provinces, comparison of the incidence of personality conflicts in the two areas signifies little. Environmental and socioeconomic factors, aside from experience in educational institutions, may be highly important variables in affecting any psychoses, neuroses, or conflicts of the university students.

Notwithstanding these criticisms, I believe that it is meritorious for researchers to study the degree of strain, if any, between the purpose, philosophy, and program of an institution, and the characteristics of its student population. It is hoped that a longitudinal study of the behavioral attributes, as well as value concepts, of students who have been graduated from the Regional Centers will be undertaken in the near future.

Tutorial Assistance

A program of academic tutorship was introduced early in the life of the Regional Colleges. Based on test scores and academic achievement, as well as other circumstances, students were assigned a tutor, who also was a regular instructor. Each tutor was to aid his students in identifying and resolving their special difficulties, and to maintain contact with the student's other teachers. If personal problems arose, the tutor referred the student to the guidance service. The system of tutorship became increasingly difficult as enrollments grew and the institutional situation became more complex. Tutoring activities were then organized only for students with achievement deficiencies. At La Serena, for example, each tutor had one to five students from a selected group whose commonly shared characteristic was low-academic achievement. The tutorial program was carefully organized, first by a meeting of all participants, then by interviews and regular sessions with tutors and individual students. Service counselors also selected students who needed tutorial assistance following the first grading period of a semester (U. de Chile, DEG, 1963a). In one study it was found that causes of academic deficiencies were classified generally as insufficient study, lack of maturity, poor aptitude, inappropriate study habits, absences, and health problems. Relatively few students had academic problems resulting from inattendance or poor health; the most frequent causes of academic deficiencies were found to be nearly divided between factors of personality, capacity, or aptitude, on the one hand, and problems of study on the other (U. de Chile, La Serena, 1963, pp.138-139).

In general, this tutorial system was based upon the collaboration of the teaching staff and the guidance service. The program never functioned entirely satisfactorily, although it could not be judged as a failure. Available evidence indicates that this program virtually has disappeared. Decisions and referrals based upon diagnosis and evaluation became more and more difficult as student numbers increased. Staff limitations, teaching loads, and the inconclusiveness of program evaluations were major factors in the decline.

Admission to the University Centers

A new concept of admission was introduced with the establishment of the Regional Colleges (Sálas N., E., 1966). Admission was stressed as one stage in the guidance process, to enable the student to choose his specialization according to his interests, aptitudes, and abilities. Until 1967 graduates of the secondary school were required to pass subject-matter examinations for the baccalaureate degree (bachiller en humanidades, or bachillerato) prior to applying for admission to professional schools of the university.[1] A student who failed to meet the requirements of a specific school could not pursue a second choice without beginning the admission process all over again. Students who wished to enter a Regional Center benefited from the organization of all carreras under one administration, so that denial of admission to one specialization did not bar applicants from consideration for admission to other programs.

Admission to a Regional Center prior to 1967 required that a student be a secondary school graduate, no more than 25-years-old for the day program, or 40 for the evening program, but he or she did not have to take or pass the five examinations for the bachillerato (three in different fields of knowledge, one in oral and written comprehension of Spanish, and one on reading competency in a foreign language). Five tests also were required for admission to the Regional Centers (one in verbal general capacity; one in nonverbal general capacity; a test of verbal reasoning; a test of numerical ability; and one on understanding of written Spanish). The DEG and the Colleges chose to use objective and standardized tests, some prepared in Chile and others adapted from abroad. Test results, information from questionnaires, interviews, and grades from the secondary schools were used to consider the carrera preference of the applicant. A member of the guidance staff concluded the procedure by talking with the applicant and explaining test results pertinent to his academic goal. Admission, then, was a selection process adapted to the applicant's preferences and characteristics, and based upon a prognosis of academic and professional success. The procedure was followed carefully, with full respect for individual differences within a highly heterogeneous group.

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[1] The bachillerato was not a certificate of secondary school graduation, because those who sought it had to first successfully complete their secondary school studies. Nor was the bachillerato a university degree; it was merely a necessary qualification for those who wished to apply to admission to the university.

In 1967 the University of Chile abolished the bachillerato and substituted an academic aptitude test as a prerequisite for admission to the university. Some of the schools of the university began to apply specific knowledge and aptitude tests as part of their admission procedures. Unlike the previous university tests for the baccalaureate, these school tests were objective and standardized. The University Centers also included the academic aptitude test of the university in their admissions program in 1967. Analysis of the test results showed satisfactory positive correlation between the scores in the aptitude test and the scores in the Regional Centers' tests. Consequently, in the following year the aptitude test replaced the battery of tests which the Centers had used (U. de Chile, DCCU, 1969c).

By 1968, then, the Regional Centers were fully incorporated in the new admission program of the University of Chile. Now other universities in Chile, except the State Technical University, require completion of the academic aptitude test and use its results as a basis for admission. Special tests for admission to certain schools in Santiago are also required for admission to parallel carreras in the provinces. Each applicant chooses a sequence of four preferences of specialization and a preferred order of universities or campuses which he wishes to attend. Computerized techniques assure complete objectivity in the selection of admittees. The scores for the academic aptitude test and special carrera tests, together with grades during the last three years of secondary school, are weighted as desired by the school or carrera staff, and then combined into a total admission point score (puntaje). This total score is the determinant of admission and applicants are informed by public announcements of their admission. If an applicant qualifies for his first choice, he is given no other alternative. If he qualifies for a second, third, or fourth choice, he may also be placed on the waiting lists of prior choices. An applicant may resign as an admittee and remain on waiting lists. Once he matriculates in the program and university or campus for which he has qualified, he is not permitted to transfer to another program even though vacancies may arise. In order to fill all vacancies in the first-year course of studies, a series of three or four announcements are made during the first month of the academic year. In this manner names on the waiting lists may be drawn in order if all those in the original list of admittees do not matriculate at the appropriate time (U. de Chile, Oficina de Informaciones, 1967, pp.11-12; Oficina de Selección y Admisión de Alumnos, 1969). Applications and test scores for a given year are pertinent only for that year. Candidates for admission may appeal decisions and secure a review of their cases by counselors and professors. Applications may be repeated and often are, even if a student already is enrolled in a program of the university, because he may wish to change his specialization.

Several features of the earlier admission system of the Regional Centers have been adopted in the universitywide program. First, the academic aptitude test has been designed to measure the capacity for reasoning and understanding in the use of words, ideas, and numerical symbols. Emphasis is given to consideration of probable academic success, rather than just to evidence of knowledge in specific subjects. Second, the program facilitates entrance of a candidate into one of several fields at the university, giving him the opportunity to compete for admission to the campus of his choice, which is an advance over the previous method of admission to one school in one university. But the concern of the Regional Centers for pre-university guidance and for diagnosis and guidance in the Centers themselves appears, so far, to have little support in the entire university. Until this occurs with some flexibility in transferring from one specialization to another, the new admissions system may be mechanically satisfactory and an improvement over the old method, but it will not adequately reflect informed and intelligent choices by students themselves. Evidently, the university's office of selection and admission regards the program as a developing one, and problems of diagnosis, guidance, and validity might be studied and resolved later.

The Technical Secretariate of the University Centers (STCU) and the Centers have an important role in extending information and opportunities for higher education to the provinces. Heads of guidance services in the Centers function as the coordinators of admissions for the University of Chile in their respective regions. They provide information to the secondary schools, organize the gathering of applications, grades, and personal data from candidates, coordinate the testing program, announce admission results, and supervise matriculation of qualified candidates. They use the radio and the press extensively in these activities.

The Centers' staffs have a formidable task in supervising students completing forms, taking tests, and finally matriculating. The situation suggests that guidance services have been impaired as a result of these demands during the months of involvement with admission procedures. But identification of the Centers in the program as campuses of the University of Chile has brought them stature in their regions and throughout the country.

The national university admissions program has improved students' access to higher education, but has also brought other problems to the provinces. Current data indicate an increasing proportion of Center students are coming from the metropolitan area of Santiago, or other regions of the country. Unless warranted by distinctive or unique carreras, or by inadequate use of available capacity, an influx of students from other areas may be detrimental to educational opportunity within the region which each Center serves.

Several conditions have been conducive to an increasing percentage of students from outside the service zones of the Centers. First, the growth of secondary education and the abolition of the bachillerato has placed an increasing pressure upon the facilities of universities in the central zone. Second, the national university admissions program permits simultaneous application to several campuses of the university, whereas, the coordinated admissions procedures of the Centers had tended to limit applications mainly to students within the region. Third, secondary school graduates from the central urban area of the country tend to achieve higher scores in the admissions program than do graduates from the provinces. Perhaps the difference can be ascribed to the reputedly higher quality of secondary schools in Santiago, to the stimulating effects of a metropolitan environment, and to the higher proportion of students in Santiago whose families are from the middle and upper socioeconomic strata. The character and validity of the academic aptitude test needs careful review also, for it may not be equally suitable to those in the provinces and in the metropolitan area. An analysis of 1969 admissions scores of admittees to eight different carreras offered by the University of Chile in Santiago and three or more of the Regional Centers showed that the median scores of Santiago admittees were well above those of the Centers in the same carreras. With the exception of one carrera and one Center, Santiago scores were higher in all cases in comparing the highest scores and the lowest scores of successful candidates with those of the Regional Centers. In all, only 7.8 percent of the admittees of the various Regional Centers achieved scores at or above the minimum of successful candidates in Santiago. Such overlapping ranged from 3.1 percent in secondary school teaching, with specialization in biology, to 15.3 percent in social work.[2]

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[2] Listing from _El Mercurio_, March 2, 1970. Calculations by author.

The trend toward an increasing proportion of Center students from Santiago or other regions remote from the individual Centers might be regarded as a result of opening wider the doors to higher education, not merely a local problem for the branch. It may be necessary to reexamine the suitability of the national policy toward university admission, particularly in relation to the need for socioeconomic development. Unless adequate resources or improved organization and techniques are developed, the quality of education will deteriorate with the increasing numbers of students. Furthermore, an "over-educated" population, in terms of existing and potential manpower requirements, might not be favorable for economic development in Chile. However, adequate consideration should be given to the importance of university-educated citizens in furthering cultural and social progress.

A careful analysis of the reasons for Santiago students' attending the Regional Centers might be in order. Jarry (1970, pp.74-75) found that nearly one-half of a Santiago sampling of university students desired to work in the provinces, especially those preparing to be teachers. Other reasons for studying in the provinces might be insufficient opportunitites for advanced studies in short-term carreras or even in over-crowded four- and five-year specializations in Santiago. The University of Chile in Santiago does offer several short-term carreras (Chapter 1), and the State Technical University recently has shown interest in offering such programs. A candid view of the pressures and preoccupations within the University of Chile gives little reason for being sanguine about future strengthening of resources and services which will be devoted to short-term carreras. It is most probable that the university will emphasize teaching and research in the disciplines and the advanced professional fields.

The Centers' responsibility to students of the provinces might include a form of protection against excessive competition from Santiago residents. Perhaps a percentage quota of Santiago residents could be set in relation to the number of vacancies in various carreras. Or an additional number of admission points might be allowed for applicants from the service zone of the respective Center; absolute priority for all applicants from the service area would be unduly prohibitive.

Lest one conclude that the campuses in the provinces do not serve graduates of local secondary schools, 60.0 percent of all graduates in December 1966 from provinces outside the central zone--Santiago, Valparaíso, O'Higgins, and Colchagua--entered the Regional

Centers of the University of Chile (U. de Chile, DCCU, 1968a, pp.42-43). Some of the remaining graduates in this group entered other institutions, but many went to work or became homemakers.

In the long run it might be justifiable to establish one or more institutions for intermediate-level professional careers in the Santiago region rather than depend upon the Regional Centers or the professionally oriented universities in Santiago for such training to Santiago residents. Originally, this plan was included in the development of the Regional Colleges.

A sample of 46 students were asked why they chose to attend the Center where they were enrolled. The respondents mentioned the following: the Center is near my home and family; the Center offers the specialization which I prefer; the institution and its course of study please me; my family preferred that I study here; I was not admitted to the institution of my first choice; the costs of living and education are less. Nearness to home and family was considerably more important than the remaining reasons. The sample were also asked their reasons for selecting the carrera in which they were enrolled. Two reasons were frequently registered: the specialization seems to be more appropriate to my interests, aptitudes, and abilities; and I can complete the program in less than four years, and therefore it is more economical for me. Farther down the list were such reasons as, it is similar to the specialization which was my first choice and to which I was not admitted; it will give me employment and economic security; and it was recommended by my parents, relatives, or friends.

Jarry (1970, p.34) concludes that there is a significant relationship between the economic situation of a student and his choice of a short or a long carrera. Those in the lower economic strata tend to choose shorter carreras. Democratization of higher education--equalization of opportunity--has not yet been realized if qualified students from poorer families have little chance, even with an expanded loans program, to complete a longer carrera of their choice. Labbens (1968, p.57) speculates on the existence in Chile of a more subtle form of inequality which may have resulted from establishing the Regional Centers which concentrated upon short carreras. Awarding a university degree for these programs, he suggests, tends to satisfy the need for prestige in the provinces, while still leaving the upper socioeconomic groups a monopoly of the prestigious long carreras. Labbens merely raises the question, since research evidence on this point is lacking. It seems as if any fear of manipulation or discrimination against the lower socioeconomic strata would be partially assuaged by the development in the Centers since 1965 of a number of four- and five-year carreras. National need and available resources justify concentrating longer and more intensive specializations in a few universities, especially in the urban areas. A system of credits for university studies would do much toward equalizing opportunity and permitting Chile to derive full benefit from its ablest men and women. Such a system, complemented by willingness of university schools to accept transfer students, would permit movement of qualified students from the provinces to Santiago or elsewhere.

A novel plan for extending opportunities for admission to the University of Chile in Santiago, and so eventually to participating Regional Centers and to other universities, was initiated in 1969 under an agreement of the Minister of Education, the University of Chile, and the National Institute for Professional Development (Instituto Nacional de Capacitación Profesional--INACAP). This program offers blue-collar and white-collar workers (obreros and empleados) a chance to complete secondary-level studies in order to qualify for admission to the university. The university-oriented goals of this program are distinctively different from those of the evening secondary school programs for adults. The first phase of the Pilot Plan for the Higher Promotion of Work (Plan Piloto de Promoción Superior del Trabajo), that of the special and intensive program of secondary-level study, began with 211 selected students and continued into 1970. The STCU is collaborating on behalf of the university in the technical and pedagogical aspects of this scheme (U. de Chile, STCU, 1970, p.21).

The upward trend of graduates from the secondary schools and the consequent increases in applications for admission to the university naturally have had, and will continue to have, an impact upon the regional campuses. (Tables in Chapter 2 provide information upon enrollment trends in these young institutions.) Enrollment in the final year of middle-level schools rose from 24,604 in 1967 to 33,342 in 1970 (El Mercurio, March 6, 1970), an increase of 35.6 percent. According to a projection of the office of planning, of the Ministry of Education, enrollment in secondary schools may rise in 1971 to 51.0 thousand, and to 88.9 thousand by 1975 (Corvalán and Schiefelbein, 1969, Anexo No.3). Recent history suggests that applications for admission to the university-level institutions will soar more or less in direct relationship to the number of secondary school graduates. The office of planning of the University of Chile has projected that by 1975 approximately 90,000 applicants will seek admission to Chilean universities. If the same relationship is maintained between the number of applicants and the number of places for first-year students, about 33,000 places will be required (El Mercurio, March 6, 1970), meaning an increase of 12,000 within five years. Assuming the University of Chile continues to serve half of the university students, its campuses may need to create 6,000 new places for first-year students. The actual number of applications each year will depend not only upon the current year's graduates, but also upon the number of previous applicants who did not qualify for admission the first time, the number of earlier graduates who are applying for admission for the first time, the number of university students applying for admission to transfer to another program, and the number of foreign students who file applications.

First-year vacancies in carreras of the University Centers normally have been filled by admittees. For example, in 1969 the eight campuses listed 3,545 places and their first-year enrollment was 3,686. While students who fail a portion of the year's course of study are not required to repeat the entire year, part of the difference between the two totals may be accounted for by repeating students.

Applications to institutions of higher education have risen greatly. In 1967, 29,678 applications were filed and 50,600 in 1970, according to the University of Chile office of planning. This increase of 70.5 percent, occurring mostly between 1969 and 1970, doubtlessly was influenced considerably by the reorganization and growth of the secondary school program and by the national university admissions program. Given the 10,887 first-year vacancies in the University of Chile in 1970 (El Mercurio, March 13, 1970), total admissions may have reached 21,000 in the eight Chilean universities. Even if many of the estimated balance of 29,000 applicants entered the labor force during the year, probably a large proportion of the total group applied again for admission in 1971. The degree of absorption of the applicants will be determined by improved utilization of existing capacities and resources, adaptation of educational specializations to the realities of socioeconomic development, and the resolution of the dilemma of quality versus quantity in higher education. In these matters, the University of Chile Centers in the provinces can act only in accord with institutional policy, which of course they may influence.

Retention of Students

The validity of the selection and admission process is generally reflected in the retention of students. As in other countries, it is considered highly desirable in Chile that admittees continue their university studies until they qualify for graduation. Students who drop out before graduation have little, if any, chance to benefit economically from job opportunities in their specialization, even if they have completed part of a university program. Entry to professional and technical occupations customarily is based upon conformity with strict requirements. Yet a recent study by Bruton (c. 1967, p.37) shows that Chilean students who have completed a portion of a university education subsequently maintain earnings equivalent to those of graduates. These nongraduates may not become professionals in their originally intended specializations, but their capacities evidently enable them to advance to more responsible positions. Bruton's findings should motivate the University Centers to conduct studies of their dropouts (deserciones) in order to ascertain their employment and earnings. Regardless of the potential earnings of a dropout, however, the specialized resources that the university has devoted to him have not been used optimally. The dropout represents a loss of potential specialized labor to the country. For students from lower socioeconomic strata, their dropping out probably has an adverse effect upon their chances for upward social mobility. The problems of the dropout and the repeater are similar in Chile, but the repeater probably has a better chance to salvage himself educationally. Nonetheless, he too uses university resources, taking the place of a student who might therefore be barred from entering a carrera.

In the Regional Centers, a student achieving satisfactory grades in any part of a year's sequence is allowed to proceed to the next year's sequence for which he is qualified. A failing grade in a required course entails repetition of that course and bars the student from any advanced courses based upon the one which he has failed. Students, however, are classified as being in a given year of study even though some may be taking courses from sequences of two or more years. A student may be advised to discontinue attendance at the Center, but suspension for deficient scholarship is not practiced. Contrary to Center practice, it has been common in the university at Santiago to require repetition of all of a full year's sequence if a student has not met all requirements. Presumably, a student might continue such repetition indefinitely.

Schiefelbein comments that the large enrollment growth in the first year of study indicates that the university has been opening its doors to a larger number, rather than enabling more students to complete their university studies. In 1965, 41.9 percent of the first-year class at the University of Chile were repeaters; in the second-year sequence, repeaters constituted 21.8 percent of the enrollment; and in the third year, 15.7 percent (Schiefelbein, 1968, pp.34-35). Data from the University Centers for the two following years indicate that repeating students in first-year studies constituted 0.6 to 5.0 percent of the first-year classes of individual Centers, and 0.5 to 9.0 percent of the second-year classes (U. de Chile, Inst. de Invest. Estadísticas, 1966a, p.114; 1967a, p.128). The higher figures, which could reflect a difference in academic expectations in comparison with other Centers, were those of the university campuses at Temuco and La Serena. While the repetition rate at the Centers has been far below that for the university as a whole, it should be noted that the carreras and activities in the university at Santiago are considerably different from those in the campuses of the provinces. As early as 1964, the DEG introduced measures to improve the retention rate in the three Regional Colleges functioning at the time. Previously, the retention rate of students advancing from the first to the second year of study averaged 67 percent at Temuco and 60 percent at La Serena, even when an atypical year was eliminated (U. de Chile, DEG, 1964, pp. 113-114). When the Master Plan for the Regional Colleges was prepared in 1964, it was projected that the average rate of retention would be 70 percent from the first to second year at all Regional Colleges.

Enrollments of the first year course of study are compared to the second year, in a series of two successive years over the period of 1966 to 1970 (Table 76). This period has been chosen because of the organizational activity of the Centers, the eighth Center having been initiated in 1966, and because the reform activities of 1968 and 1969 might have had an adverse effect upon attrition rates. Percentages in Table 76 are based upon differences between total enrollments in the first and second years of study, over two-year periods; for example, a comparison of first-year enrollment in 1966 and second-year enrollment in 1967 indicates that 78.2 percent of the first-year students continued into the second year of study. Any upward effect upon these rates, as a consequence of repetitions in the second year, probably would not exceed 2 percent. Students who repeat the first year are not regarded as dropouts; incoming or outgoing transfer students would have a negligible effect upon the results. Table 76 indicates that the eight Centers combined have retained students at a level well above the 70 percent target set in 1964. The instability of the 1968 reform period might have been expected to produce an adverse effect upon retention for the following year. While the figure for all Centers combined did drop slightly during the 1968-1969 period, substantial decreases occurred only at Osorno, Arica, and Talca, while considerable improvement took place at La Serena and Temuco. From 1969 to 1970, the retention rates improved at six of the eight Centers. The record shows a high measure of stability on the part of the Centers.

TABLE 76

Retention Rate from First to the Second Year
of Study, 1966-1970, in percentages

University Center	1966-67	1967-68	1968-69	1969-70
Arica	78.2	77.6	66.0	70.6
Iquique	47.6	50.9	49.9	53.7
Antofagasta	70.9	69.9	72.4	67.3
La Serena	71.6	82.9	88.5	90.9
Talca	80.4	84.4	76.6	84.9
Ñuble	73.6	77.3	78.7	83.1
Temuco	80.7	74.6	86.8	80.5
Osorno	73.1	79.8	46.6	54.9
All University Centers	79.7	76.7	74.8	76.8

Sources: Enrollment data from U. de Chile, Secretaría Técnica de Centros Universitarios and Instituto de Investigaciones Estadísticas. Calculations by author.

Using data from Temuco, La Serena, and Antofagasta, retention rates have been calculated for eight programs whose enrollment constituted in 1969 about two-thirds of the total enrollment of the Regional Centers (Table 77). Data are generalized for the three Centers because of the recent introduction of some carreras and the occasional lack of continuity of others. Table 77 is useful to show the spread of retention rates, rather than to note trends or tendencies. Rates for the three- and four-year carreras compare reasonably well with those of the Centers as a whole, excepting secondary school teaching.

A common measure for evaluating the performance of institutions is the ratio of admittees to graduates, allowing for the normally required time to complete the particular specializations (see also the input-output analysis in Chapter 10). This analysis was made of the three Center carreras under the general jurisdiction of the Faculty of Agronomy: agricultural technology, home guidance, food technology (Table 78). The basic data include 862 admittees in agricultural technology, 709 in home guidance, and 189 in food technology. Admittees after 1967 were not included, so that all would have completed the three-year program by the end of the period if normal and regular progress were made. Considerable variations occurred in the admittee-graduate ratio, in some

TABLE 77

Retention Rates in Selected Carreras at Three University Centers, 1966-1969, in percentages

Carrera Duration	Base of 1966	1966-67	1966-68	1966-69
Three years				
Administration	100	85	48	
Agricultural technology	100	97-108[a]	85-88	
Chemistry technology	100	58-98	61[a]-69	
Home guidance	100	87-90	90	
Public administration	100	77-84	74[a]-79	
Four years				
Nursing	100	84	66	52-64
Social work	100	76-93	69-97[a]	
Five years				
Secondary school teaching	100[b]	50-62	36-51	32-49

Source: Enrollment data of STCU.
Calculations by author.

[a] Enrollment was augmented by repeaters.

[b] Includes all specializations.

TABLE 78

Number of Admittees per Graduate in Three Carreras of the University Centers, 1961-1969

	Carreras		
University Center	Agricultural Tech.	Home Guidance	Food Tech.
Arica	2.2	7.5	
Iquique		a	
Antofagasta			13.0
La Serena	2.3	2.6	2.3
Talca	2.0	2.3	
Ñuble	5.2	a	
Temuco	1.9	1.7	
Osorno	2.9	1.8	
All University Centers	2.3	2.7	3.8

Source: U. de Chile, Secretaria Técnica de Centros Universitarios, Santiago.
Calculations by author.

[a] Students were admitted to the carrera, but none had been graduated by the end of the period.

cases reflecting unusual difficulties in the individual carrera of the specific Center. For all Centers combined, in each of the three specializations more than two admittees were necessary so that one graduate might emerge; 3.8 admittees were necessary to produce one graduate in food technology. Comparable data are not available, but examples of earlier data from five-year carreras of the University of Chile in Santiago offer a basis for rough comparison: the ratio of admittees to graduates in the School of Agronomy was 3.1 to 1, and 3.3 to 1 for the Pedagogical Institute (Schiefelbein, 1968, p.35).

There are no regularized procedures for dealing with dropouts; many leave without informing staff members or the guidance service. According to the guidance workers, the main reasons for students' dropping out is that they lack money to continue or they must work to help their families. Less important reasons are the student's lack of interest in his specialization, and the desire to study in another institution. The evidence indicates that financial aid, or supplementary employment while studying, would be a key to improving retention rates, raising the admittee-graduate ratio, and actualizing a state of equal opportunity for all students.

Transfer of Students

The earlier expectation that qualified students would be able to transfer to professional schools in Santiago has not been satisfactorily realized (see Chapters 2 and 4). In fact, transfers to other institutions have been few and difficult, occurring only occasionally when authorities of the receiving campus judge the applicant qualified and have a place for him in the specific program. Statistics on transfers are not maintained regularly. A 1966 report of the Temuco Center shows 119 transfers completed during 1962-1966, a bare majority continuing studies at the university in Santiago. Of this group, about two-thirds were accepted in Santiago by the Faculty of Philosophy and Education; nearly one-half went to nearby Universidad Austral at Valdivia. There is, thus, little evidence of continuity in inter-institutional relationships among different carreras. The transition in 1965 of the Regional Colleges to the status of University Centers also precluded the necessity of transfers in teacher education and a limited number of four-year carreras.

Estimates in 1969 by coordinators of the guidance services in the majority of the Centers indicated that less than 10 transfers occurred annually from the individual Centers to other campuses or institutions. Transfers are even rare between carreras within the individual Centers. Within the university, a student has to reapply for admission if he or she wishes to enroll in another professional school, but this has not been necessary in the Centers because they function under a single organization and administration.

A formidable obstacle to the development of a transfer system is the lack of uniform credits and the difficulty of evaluating studies completed according to academic standards. In the University of Chile the prevailing attitude is favorable to introducing a credit system. Once the necessary studies and agreements are reached, a credit system should facilitate transfers in accord with approved procedures and without academic penalties. But transfers between campuses or universities also call for adaptation on the part of the staff members. As a consequence of accepting the Regional Centers as sedes, professors and students in the University of Chile at Santiago now may be more agreeable to receiving transfer students than they were in the early years of the Regional Colleges. Schools and faculties, vigilant in maintaining jurisdiction over their specializations, have been reluctant in the past to accept or accredit studies completed elsewhere. Students, too, at the university in Santiago have resisted moves to simplify the transfer of students from the provinces, because they were unfamiliar with the Centers and apprehensive about increasing competition in the professions. Students in the provinces have been so accustomed to the rigid pattern of commitments to specializations that they have not exerted pressure for transfer. The sentiment of the local residents and Center staff members apparently is that students should be able to finish their studies in the local Center since a transfer often entails higher living expenses and an extended period of time for the completion of studies.

With a regularized transfer procedure, students would be able to complete preliminary studies locally and then to transfer to another campus, if necessary, in order to complete the course of study. A continuity of educational opportunity would be provided to those completing short carreras and wanting a related specialization at a more advanced level. Efficient use of resources would dictate that a limited number of complete carreras be given at each Center and that certain specializations be given in only one or a few campuses; such an arrangement would foster mobility of students and flexibility of transfers. Summarizing, then, a system of transfer would permit more educational opportunities, facilitate self-development and realization of human capacities, and assist in effective allocation of personnel and material resources for advanced studies.

STUDENT ORGANIZATIONS AND ACTIVITIES

Participation in Affairs of the University Centers

Resistance to university reform in Chile was overcome in recent years by student organizations (Vera, 1969, pp.200-201). The most notable feature of organized student activity since 1968 at the University Centers in the provinces has been the intensification of student participation in electing officials and engaging in deliberations of the councils of the Centers and their departments. But since the beginning of the Regional Colleges, their student government had been consulted by directors and had participated in committees. This form of student engagement has existed in Latin American universities for many years and emerged from the Cordoba University Reforms of 1918. Co-government has given students at the University of Chile a weighting of 25 percent in university elections, which places a heavy responsibility upon students and their representatives. It would be premature, even if this study had included such a goal, to evaluate the performance of students in this work. Granting the need to consult students on a wide range of institutional and curricular affairs, one may ponder over the validity and workability of student participation, representation, and voting on all institutional policies. The Economic Commission for Latin America (1968, pp.138-139) comments on this lively and complex subject.

> On a purely rational plane, it is hard to defend co-government. It is understandable that the students should be consulted regarding the services most directly affecting them (dining rooms, scholarships, etc.), but it is difficult to justify their participation in the drawing-up of curricula and programmes, or their having a say in teaching appointments, etc. The establishment of a university policy in all these matters presupposes that those who formulate it are competent to do so. By definition, students would appear to lack this competence. There is another factor, too: as an organized group, the students may have recourse--apart from exerting their legitimate influence in co-government--to traditional methods of protest (strikes, etc.). This gives them much more power than is theirs by law. In extreme cases--and some universities seem to be approaching this point--it would be very difficult to obtain a teaching post, and virtually impossible to become a rector or remain in that post, without student approval.
>
> It should be borne in mind, however, that this system came into being and has developed because of certain characteristics of the Latin American universities which have

> often led to their becoming relatively static institutions, lacking in dynamic drive when in the hands of teachers. In that respect, student intervention, although it has brought more drawbacks than advantages, gives the universities a dynamic force which they would probably otherwise have lacked.

Viewing the crisis of the university, Sunkel (1969, pp.29-32) holds that cogovernment is entirely justified. It is not a transitory device to achieve reform but a reflection of the aspiration of students to join in the new structure and government of the university. The student organizations of the Regional Centers, similar to the university in Santiago and other universities in Chile, have a social and political orientation. Candidates for office contend as associates of political parties, or of splinter groups within them. The situation in the Regional Centers has changed markedly since 1961 when the advisor of the Centro de Alumnos (a student organization with elective offices) on the La Serena campus requested that ongoing political activity be stopped and the students' executive committee agreed to cooperate with his request. The general assembly of students unanimously endorsed the position to remove themselves from politics (Goldames G., 1962). During the past few years, however, student organizations at the Regional Centers have moved toward involvement in organized political activity. The formal student organization in the various Regional Centers now is the *Confederación de Estudiantes de Centros Universitarios*, an affiliate of the *Federación de Estudiantes de la Universidad de Chile* (FECH). A Centro de Alumnos also functions in each carrera.

My observation and experience at the Regional Centers leads me to conclude that the Centros de Alumnos, their officers, and the student body have considerable power in the affairs of the campuses. Assemblies, protests, and strikes have occurred as attempts to cope with phenomena such as university reforms, distribution of voting representation, campus administration, budgets for the Centers and for individual carreras, and the tenure of individual instructors. As early as 1967, the Fifth Congress of Students of the University Centers convened in Talca and considered the subject of administrative decentralization of the University of Chile and the significance of the specializations which the Centers were offering (U. de Chile, DCCU, 1968a, p.22).

An illustration of student involvement occurred during the course of my study of University Centers. An integral part of the research design was a self-administered questionnaire for students who had completed at least one year at a Center and were from a number of different specializations. The inquiry was entirely apolitical; its purpose being to ascertain selected factors of the socioeconomic status of students, their study habits, their views concerning educational aspects of the Centers, and their plans for employment and residence after leaving the university.

At Arica and Iquique student samplings were obtained without difficulty and with the cooperation of the Center staff. A different situation arose at La Serena, where officials of the student organization informed the recently elected director that they wished to call a student assembly in order to discuss the study, which the rector of the university had authorized. Several of them met with the researchers first and were informed about the purposes and features of the inquiry. At the student assembly which followed, a Chilean participant in the project explained the study. Criticism was principally directed at the study because it was conducted by a researcher from a North American university, thus implying "imperialism"[3] and control by foreign interests. The few students who spoke did not deal with characteristics and instruments of the study itself. Some students said they would try to stop the study from being made at other Centers. The assembly ended without reaching any conclusion about student participation, but it was evident subsequently that some students were willing to respond to the questionnaires. Since volunteers might have introduced a selective bias in the responses, or would have precluded a representative sample, this method was not followed.

At each of the next five Centers visited, I outlined the study to the director and explained the purpose and characteristics of the questionnaire for a small sampling of students. Except for Osorno, which did not in general participate in the study, the subsequent events were similar on each campus. The director consulted student officials about the study and then informed me that they did not want to have students engage in the project. Thereupon the director chose not to endorse that part of the study which required student samplings numbering from 20 to 45 at each Center.

It is important to emphasize that students' objections were not based upon any analysis of the questionnaire itself but upon my associations with a North American university, the presumption of outside control, and reluctance by students to engage in an educational inquiry. The social climate during university reform was neither tranquil nor stable; it was volatile. Although the developmental stage of the University Centers was propitious for research in some ways, this study may have been untimely in view of the tolerance level and attitudes toward research of many of the officers of the Centros de Alumnos.[4]

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[3] The charge of "imperialism" has been a common form of student protest in Chile since 1930. For comment and recent findings on political attitudes of students at the University of Chile, refer to Glazer, 1968.

Studies of student movements[5] and student organizations of Latin American universities have shown that active participation of students is limited to a very small percentage of the students. For this reason, the acknowledged strength of student organizations must depend largely upon the support of political movements and pressure groups (Economic Commission for Latin America, 1968, pp.158-160). Leaders of major student organizations are generally regarded in Chile as promising candidates for future political and governmental posts.

Participation in Extra-Curricular Activities

The student respondents from the two Centers in the northern province of Tarapacá replied to the question, "In which extra-curricular activities do you participate frequently?" Table 79 shows a considerable variety of engagement; even more dispersion might have occurred if students from all Centers and carreras could have been included.

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[4] In 1965 Project Camelot, a comprehensive sociopolitical study of internal warfare, was initiated by the U.S. Army's Special Operations Research Office and then canceled by the Department of Defense before research actually began. Impetus for the cancellation came from intense public criticism in Chile of the purposes and planning activities of the project. As a result of the crisis, Kalman Silvert (1967, p.80) judged in 1965 that at that time not one survey research study could be carried out in Chile. The reactions to Project Camelot were still influencing attitudes toward research in Chile in 1969.

[5] I do not presume that this section is an exhaustive discussion of student movements or of conflicts in the university and society. For a recent study of these situations, refer to Bonilla and Glazer, 1970. For a cogent and brief analysis of contemporary conflict, see Gómez Millas, 1969a.

Except in several Centers of northern Chile, which have well-developed programs in music and drama (see Chapters 9 and 10), support and sponsorship of music, drama, and sports is variable, limited, or deficient. Students sometimes organize sports activities with advice and encouragement from instructors or service centers of the individual campus.

The reading and radio-television listening practices were also ascertained; more than 90 percent read newspapers, magazines, and also listened to radio and television regularly. Informational and news subjects were the preference of the majority. With respect to radio-television programs, 39 percent regularly listened to recreational programs, and about 22 percent to artistic presentations. Politics, and professional and scientific subjects, each attracted only 9 percent of the respondents regularly.

TABLE 79

Extent to Which Center Students Participate Frequently in Extra-Curricular Activities

Activity	Student Responses (%)[a]
Sports	37
Community development projects	20
Art, music or theater activities	8
Other: photography, chess, political meetings, and departmental organization	15
None, or no reply	20
Total	100

[a] Sample numbered 46.

Rights and Responsibilities of Students

Responsibilities and rights of students in the Regional Centers are a matter of concern as they are elsewhere in Chile and in other parts of the world. Disciplinary action within the university is rare. Repression of students has virtually no public support unless allegedly criminal acts are committed. Directors of the campuses in the provinces were asked, "Are the rights and responsibilities of students understood by all groups in the Center?" Responses were yes, no, or qualified statements. A variety of responses resulted: rights and responsibilities included attendance at classes and participation in university reform activity; rights included not only attendance at classes and examinations but access to loans and health services which the local student organization made available from the contributions of students; responsibilities included benefiting from studies and doing field work without promoting personal ideas or beliefs. One director stated that students are controlled in the secondary schools, but not in the Center, and that the orientation program during the first year was planned to educate students about their rights and responsibilities. One director who had a negative reply to the original question added, "Students protest about their rights and do not know their responsibilities. Many students desire and expect various things, but they do not want to serve or contribute." Still another director said that there was no policy on specific rights and responsibilities of students: "The values are new." Individual Centers can do little more than try to educate students to rights and responsibilities which seem justifiable in the current setting. A written code would not solve all problems by any means, but it would provide guidance for interpretation and use. Perhaps reform activity at the University of Chile will give attention to this delicate matter after policies of organization and structure have been resolved.[6]

STUDIES AND PLANS FOR THE FUTURE

The limited student participation in this study has been explained, but since responses of the 46 student participants (from five carreras[7] at two Centers) have corresponded well with extensive university data on several like subjects, it seems desirable to report a number of responses relating to studies and plans of students.

Responses on Studies

Opinions of instructors are relevant when discussing students' studies. Those instructors interviewed were asked what proportion of entering students had been well prepared for studying at the respective Center (Table 80).

Allowing for modest variations at several Centers, a similar distribution of opinion as in Table 80 occurred among instructors at each of the participating Centers. The instructors were also requested to indicate their opinion of the students' study habits. More than two-thirds of the group said that only a minority of students studied systematically and regularly. The balance of the respondents held either that the majority of students studied systematically or that about one-half of them did so. The same general pattern of opinion occurred rather evenly at all Centers and in seven different carreras.

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[6] A useful reference for study would be the preliminary draft of the "Statement on the Academic Freedom of Students," Committee S on Faculty Responsibility for the Academic Freedom of Students, American Association of University Professors, (AAUP, 1965).

[7] Administration, home guidance, nursery school teaching, agricultural technology, and secondary school teaching.

TABLE 80

Instructors' Opinions on Preparation of Entering Students

Opinion	Instructors' Responses (%)[a]
Majority prepared for university study	12
One-half prepared	20
Minority prepared	62
None prepared	3
No reply	3
Total	100

[a] Sample numbered 112.

Instructors were asked, "What is expected of students?" Nearly 40 percent of the instructors expected students to participate, work, and be interested. More than one-sixth of the group expected that their students would receive scientific training and would realize the capacity for having ideas and using their knowledge. About the same proportion expected students to attempt to strengthen themselves ethically, with honor and conscience. Slightly fewer observed that they expected students to achieve an integrated personality, the ability to analyze critically, and to realize their potentialities. Some instructors expected students to achieve a general base of professional training, to acquire knowledge necessary for specialized careers, to fulfill requirements for the degree, to be successful in their careers, and to bring prestige to their professions. Clearly, some disparity exists between the instructors' conception of the students' preparation and study habits and their expectations for the students.

When asked what they believed instructors expected of them, students' responses were similar to those of their teachers. Emphasis was given to sound professional training, responsible study, compliance with degree requirements, and maturity and honor as a person and a university graduate. Several said they were expected to mature in order to serve the community and aid in Chilean development. Only 3 of the 46 said that they were expected to develop according to instructors' ideas and wishes, while 4 commented that instructors expected them to become politicians, or to satisfy the minimum requirements of courses. None of the responding students thought that excessive studying was necessary in order to complete assignments outside class (Table 81). The data imply that the purpose, depth, and scope of outside assignments should be reviewed especially in view of the commitment by the great majority of teachers to the use of such assignments (see Chapter 5).

TABLE 81

Center Students' Opinions of Outside Classwork

Time required for completion	Student Responses (%)[a]
Too much	none
Adequate	61
Too little	37
No reply	2
Total	100

[a] Sample numbered 46.

More than one-third were following a schedule that signified a reasonably steady and meaningful program of outside study. However, nearly the same proportion studied rarely or only during periods of examinations (Table 82).

TABLE 82

Extent of Study Outside Class

Number of hours	Student Responses (%)[a]
Majority of days of the week, three or more hours	4
Majority of days of the week, one to two hours	13
Only a few days of the week, three or more hours	20
Only a few days of the week, one to two hours	28
Only during periods of examinations	33
Rarely	2
Total	100

[a] Sample numbered 46.

Considering the extensive hourly schedule for classes and laboratories, the data in Table 82 may not be cause for concern. The real question is the significance of outside assignments in relation to the rest of the educational program, particularly regarding the development of the student. Study outside class has implications for the standard number of hours of class attendance, the allocation of teaching resources, the acquisition of library materials, and the students' facilities for studying outside the institution. Consultations with instructors outside class are an indicator of the accessibility of instructors and the students' involvement in academic life (Table 83). Admittedly, students may be reticent or may have other class commitments at the hours when instructors are available. Student responses show considerable professional contact between students and instructors.

TABLE 83

Center Students' Conversations with Instructors

Professional contacts outside class	Student Responses (%)[a]
Frequently	19
Occasionally	48
Rarely	22
Not at all	9
No reply	2
Total	100

[a] Sample numbered 46.

Center policy requires that a student attend at least 75 percent of course meetings to qualify for the final examination. Relatively few students regarded this policy as a primary reason for attending classes; they gave proportionately far more emphasis to hearing the expositions of instructors, obtaining information necessary for examinations, or participating in discussions.

Students' Plans

More than 90 percent of the respondents expressed their intention to complete their ongoing studies and graduate. Those who planned to graduate were asked to express one, or not more than two, courses of probable action following their graduation (Table 84). Forty-one percent expressed interest in continuing their studies at another institution following graduation, a proportion which seems high. Possibly, some respondents were thinking of occasional further study, rather than intensive graduate study, or

TABLE 84

Center Students' Career Plans[a]

Plan	Student Responses (%)
To be employed in my field of specialization	78
To establish myself independently as a professional in my field	9
To be employed in an occupation that is not related to my specialization	2
To be employed in the first job that is offered to me	4
To be a homemaker	9
Other	4
Total	106[b]

[a] Sample numbered 46.

[b] Total exceeds 100 percent because several respondents indicated two probable courses of action for the future.

perhaps the proportions resulted because most of the respondents were engaged in three short carreras of agricultural technology, home guidance, and administration. Some graduates in these areas have had difficulty obtaining employment.

More than three-fourths of the sample planned to work in the field of their university carrera following graduation. (Approximately two-thirds of the sampling of graduates had been engaged in their respective fields of specialization part or all of the period since their graduation; see Chapter 8.) Only 9 percent expected to establish themselves as independent professionals in their respective specializations. Such opportunities are scarce in agricultural technology, home guidance, and administration. It seems significant that only 1 of 46 respondents planned to work in a field other than his specialization, while only 2 said that they would accept employment at the first opportunity. Women constituted 57 percent of the sample, and only 9 percent of them planned to be homemakers (*duenas de casa*).

No incompatibility is evident in respondents presenting both their plans for employment and continuation of studies. Future programs of continuing education for professionals, as well as for those with cultural interests only, may well be an increasing responsibility for the Regional Centers and other institutions of higher education in Chile. Further exploration of this possibility would be desirable in the provinces.

Students in the sampling were asked, "In which part of Chile do you think you will live after you leave the University?" (Table 85). The most important single factor in choice of location was the place where employment would be available.

TABLE 85

Choice of Residence after Graduation

Location	Student Responses (%)[a]
City where Center is located	26
Rural area near the Center	2
Santiago or vicinity	13
Any part where there is opportunity for employment	46
Other	11
No reply	2
Total	100

[a] Sample numbered 46.

Responding to a suggestion of three broad socioeconomic classifications which have much usage in Chile, students classified the status of their families. Thirteen percent placed their families in the "comfortable" (acomadada) category, 63 percent in the "intermediate" group (intermedia), and 24 percent in the lower (modesta) classification. In comparison with Jarry's findings (Table 67), these data have an upward bias. In response to the question, "Which do you expect will be your own socioeconomic level in comparison with that of your parents," 76 percent replied that it would be higher, and 22 percent noted it would be generally the same as their parents.

SUMMARY

Geographical features, history, and stages of educational and economic development in different regions all contribute to the distinctive characteristics of Center students. In the southern Centers, the family residence is usually outside the immediate locality of the respective Centers, while in the four northern Centers the family is in the same locality. At all Centers (excepting Ñuble, for which data were not available), however, the family residence of the large majority of students was in the service region of the respective Centers. For all Centers combined, nearly three-fourths of the students come from the service zone of the respective Centers, and in all of the University of Chile, including locations in the central area and in the provinces, nearly three-fourths of the students have their permanent residence in the cities where the respective sedes are located.

Results of the national program for university admission indicate that an increasing proportion of University Center students are coming from Santiago and other provinces. If this trend continues, it could threaten the educational opportunity of many secondary school graduates in the provinces. Since the aptitude test scores of the great majority of students in the University Centers are lower than the admittees to like carreras at the university in Santiago, more candidates from the vicinity of the capital can be expected to compete for places at the campuses in the provinces.

All data in this study, supplemented by findings of the University of Chile and other sources, indicate that the Regional Centers serve a considerably larger proportion of students from the lower socioeconomic levels than does the university in Santiago. While extensive overlapping occurs, parents of students in the provinces tend to have completed substantially fewer years of schooling than parents of students in Santiago. Similarly, differences appear in the occupational distribution of parents in the provinces and in Santiago; more fathers of University Center students are production and nonagricultural laborers, or farmers and fishermen, or service workers, than are the fathers of students throughout the university. Fewer fathers of Center students are professionals, technicians, business managers, or public officials, than are the fathers of all students in the university.

The economic status of students is a major factor in the determination of university policies; matriculation fees are moderate, and exemptions are often given to a high proportion of students, but the large majority of students still secure financial assistance from their parents to cover living expenses. Students contribute to a scholarship fund, the university maintains a loan fund, and some of the Centers have special funds for aiding students. The major source of loans, however, is the National Board for Student Aid and Scholarships whose operations extend to students at all educational levels. In 1970 it gave assistance, in the form of monthly loans, to more than one-fourth of the students in the Regional Centers.

Housing accommodations are directly related to the students' geographic origin. A slight majority of students in all Centers combined live with their parents, while more than three-fourths of the students of the university in Santiago live with their parents. By the same token, nearly 30 percent of the Center students live in boarding houses, while in Santiago only 3 percent of the students do so. Other data on students indicate that not more than 10 percent of the day students are employed, and less than 10 percent of the day students are married.

The guidance service of most of the University Centers has been distinguished by giving admission information and group guidance in the secondary schools, assisting applicants for admission in selecting a carrera, offering the introductory orientation course to first-year students, and counseling individual students. In spite of shortages of personnel during recent years, the guidance services at most Centers in the provinces have continued to be a basic source of information for students. But the services have become so inter-related with the admissions program that the latter threatens to take precedence, and safeguards may be necessary to maintain and improve the guidance function. Tutorial assistance to selected students has virtually disappeared. Regular employment assistance to new and older graduates has not developed, although some Centers had been concerned with setting up departments of occupational information. One of the most auspicious activities of the guidance service has been its continual involvement in gathering data and participating in studies about students, which could be the beginning of a program of institutional self-study.

Modal rates of successive first- and second-year enrollments have been above 70 percent in the six Centers which have higher enrollments. Retention rates in individual carreras have been studied by the guidance service at several Centers. Attrition in the carreras of secondary school teaching is comparatively high, and in a few other carreras it was found that more than two admittees were required in order to produce one graduate. The most common reason for students' dropping out is economic need, often their own or their families'.

Lacking a system of uniform credit in the University of Chile, transfers between campuses are infrequent, probably not exceeding ships whose operations extend to students at all educational levels. In 1970 it gave assistance, in the form of monthly loans, to more than one-fourth of the students in the Regional Centers.

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Lacking a system of uniform credit in the University of Chile, transfers between campuses are infrequent, probably not exceeding

10 annually from any of the respective Centers. Likewise, transfers from one carrera to another are uncommon within the Centers, although guidance workers are willing to facilitate them. Repetition of the full sequence of courses in a given semester or year is a common occurrence in the university, but not in the Regional Centers, where individual courses may be repeated. Probably not more than 5 percent of first-year students repeat the first year in any individual Center, which is far below the prevailing rate in most of the university specializations in Santiago and Valparaíso.

Students in the study sample expressed views of their instructors' expectations of them, which were similar to those which the instructors stated. Frequently mentioned were responsible commitment to study, sound professional training, and personal development. Only a minority of first-year students were believed prepared for beginning university-level studies, and the majority of instructors said that only a few students study systematically and regularly. However, the majority of students replied that the required study was not excessive but was necessary in the university. More than one-third reported that they studied only during examination periods, while about the same proportion replied that very little studying was required.

Students and student organizations in the University Centers now exercise considerable influence in the decisionmaking processes of the University Centers. Compared to conditions in the early 1960s, co-government is a reality under the program of university reform, and student organizations have become more politicized and militant. Among officials of the Centers there appeared to be no consensus about the rights of students and not much evidence of agreement on their responsibilities.

Students' plans seem to follow a pattern of graduating, working in the field in which they have specialized, living wherever employment is obtained, and continuing to study in the university. More than three-fourths of the students expressed their intention to seek employment in their specialization and the majority of respondents planned to pursue additional studies. These projections have considerable importance to the future programs of the University Centers in the provinces, as well as to other institutions.

CHAPTER 8

THE GRADUATES OF THE UNIVERSITY CENTERS

With the establishment of the original Regional Colleges in provinces outside the Santiago metropolitan area, it was anticipated that many of their graduates would remain in the provinces and contribute to their development, concentrating on the needs of the regions. One important phase of this inquiry was a search for evidence of what the graduates had done: were they employed in their specialties? were they living in the provinces where they had studied? were they satisfied with the training which they had received?

By August 1970, a decade after the founding of the Regional College at Temuco, 2,866 students had been graduated from the eight University Centers.[1] Nearly 45 percent, a total of 1,287 had completed their university studies at the first Center, but sizeable groups had come from each of the seven younger institutions. An impressive 306.5 percent increase of graduates occurred in 1967, when the initial classes of the three-year carreras in four Centers terminated their studies, and, in spite of the university reform period of 1968-1969, the number of graduates jumped 37.7 percent in the latter year. To some extent this increase reflects the unexpectedly low totals for 1968 at La Serena and Temuco. It was also augmented by the first graduating class at Ñuble in 1969. Only the Center at Talca recorded a steady annual increase of graduates during the period 1967-1969. Table 86 registers the fluctuations at various Centers, reflecting curricular experimentation, responses to variable employment opportunities, and instability arising from university reform. The sex distribution of graduates during 1961-1969 shows that 1,340 of 2,305 graduates were women (Table 87). This 58 percent majority reflects the experience at Temuco especially, although women were a majority of graduates at Antofagasta and Arica. As a result of developmental difficulties until the middle 1960s, graduates for several years were concentrated within the two-year program of elementary school teaching. Beginning in 1967, graduates were completing their university studies in a considerable variety of fields at seven different Centers (Table 88). From 1967 to 1970, the Regional Centers graduated students from 25 different

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[1] The number of graduates by year are: 1961, 98; 1962, 100; 1963, 97; 1964, 76; 1965, 108; 1966, 108; 1967, 439; 1968, 538; 1969, 741; 1970 (through August), 561. Source: Secretaría Técnica de Centros Universitarios.

TABLE 86

Graduates of the University Centers, 1967-1970

Centers	1967	1968	1969	1970[a]
Arica	32	43	32	2
Iquique		50		7
Antofagasta	20	58	44	120
La Serena	83	63	110	103
Talca	49	77	165	79
Ñuble			79	66.
Temuco	217	133	258	155
Osorno	38	114	53	29
Totals	439	538	741	561

Source: U. de Chile, Secretaría Técnica de Centros Universitarios, Santiago.

[a] Data for 1970 are not comparable with totals of earlier years since only graduates through August are included.

TABLE 87

Graduates of the University Centers by Sex, 1961-1969

	Men		Women		Total	
Centers	N	%	N	%	N	%
Arica	26	24	81	76	107	100
Iquique	26	52	24	48	50	100
Antofagasta[a]	45	37	77	63	122	100
La Serena	158	49	161	51	319	100
Talca	131	45	160	55	291	100
Ñuble	57	72	22	28	79	100
Temuco	427	38	705	62	1132	100
Osorno	95	46	110	54	205	100
Totals	965	42	1340	58	2305	100

Source: U. de Chile, STCU.

[a] Does not include any graduates of the Pedagogical Institute or the School of Social Work.

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TABLE 88

Carreras of Center Graduates, 1967-1970

Area and Carrera	1967	1968	1969	1970[a]
Agriculture and rural development				
Agricultural technology	92	59	192	97
Home guidance	15	73	140	63
Administration, industry, and applied arts				
Administration	51	64	43	40
Public administration		3	90	18
Construction technology	6	16	10	5
Drafting technology	20	17	21	4
Applied arts technology	10	2	3	
Chemistry technology	23	6	13	36
Food technology	30	20	20	15
Electronics	6	11	10	
Health services and social work				
Nursing		41	36	53
Nutrition and dietetics		48	46	37
Obstetrics	32			36
Medical administration assistance	8	21	22	
Medical technology	7	21		17
Public health technology			4	6
Social work assistance				2
Social work	17	17	6	24
Education				
Elementary school teaching[b]	122	119	54	43
Secondary school teaching, all specializations			3	52
Library science			28	13
Totals	439	538	741	561

Source: U. de Chile, STCU.

[a] Data only through August.

[b] Includes graduates of discontinued two-year program and of current three-year carrera.

carreras, including five specializations in secondary school teaching.

In this study of the Regional Centers, questionnaires were addressed to 798 graduates, comprising 34.6 percent of the total number of graduates from all Centers during 1961-1969. The study concentrated upon the graduates of 1967, 1968, and the mid-year of 1969 since mail addresses tended to be less reliable the older they were, and, aside from Temuco and La Serena, the Regional Centers did not produce any graduates until 1967.

From 739 inquiries actually reaching graduates in December 1969, a total of 241 responses were obtained (32.6 percent). Responses of graduates from each of the seven Centers clustered closely around this figure. In a nearly evenly divided list of men and women the response rate was slightly higher for men (53 percent) than women (46.9 percent). The distribution of the responses--by Centers, sex, carreras, or employment--gave no evidence of bias in determining the rate of return.

The responses are classified by Centers (Table 89), by year of graduation (Table 90), and by carrera (Table 91) of the respondents when they were students. Respondents included graduates from 21 carreras. Some of the newer carreras, notably most of those in secondary teaching, did not yet have any graduates in 1969.

TABLE 89

Graduate Responses to Questionnaire, by Center

Centers	Responses (N)	(%)
Arica	4	2
Iquique	15	6
Antofagasta	10	4
La Serena	62	26
Talca	59	24
Ñuble	21	9
Temuco	70	29
Totals	241	100

TABLE 90

Graduate Response to Questionnaire, by Year of Graduation

Year	Responses (N)	(%)
1969	93	39
1968	86	36
1967	51	21
1966 and earlier	10	4
Not known	1	—
Totals	241	100

TABLE 91

Graduate Responses to Questionnaire, by Carreras

Carreras	Responses (N)	(%)
Agricultural technology	56	23
Administration	35	14
Home guidance	22	9
Elementary school teaching	21	9
Food technology	17	7
Public administration	16	7
Nutrition and dietetics	13	5
Drafting technology	11	5
Chemistry technology	7	3
Others (12)	43	18
Totals	241	100

THE RELATIONSHIP OF PROFESSIONAL PREPARATION AND EMPLOYMENT

Need for Employment Assistance

Judging from responses of directors and heads of carreras, the Centers have considerable awareness of the need to provide assistance to graduates in their quest for employment. Guidance departments have attempted to maintain occupational information services, but these are not comparable to placement services which systematically assist students to obtain employment. Less than one-half of the chiefs of carreras said that graduates received some type of assistance in obtaining employment. An appreciable number of graduates criticized the employment assistance which they had received, while 20 percent said such aid was lacking.

Prominent residents of the Centers' communities believed, for the most part, that graduates need help in order to secure full-time employment. If community employers were invited to participate in employment surveys, group guidance activities, and curriculum improvement in their respective fields, the results might be auspicious for graduate employment. Evidence at hand indicates that many people in the communities would be pleased to cooperate in

programs of this kind.

First Employment after Graduation

A total of 218 of the reporting graduates (90.4 percent of the respondents) had obtained some employment since graduation. The majority (52 percent) reported their first employment was in the field of their specialization. Majorities of graduates in administration, home guidance, and public administration obtained their first jobs in fields other than their specialization. Ten percent of the respondents had not yet obtained their first employment; most of them had specialized in agricultural technology or home guidance. Four of the unemployed were continuing their studies and four had married and become homemakers.

Some probable reasons for lack of success in obtaining a first employment might be that those graduates were prepared in fields in which employment opportunities were relatively scarce; they were not among the most competent graduates in their specializations for employment; they did not choose to leave their home community in order to seek employment elsewhere; or they simply did not seek employment.

TABLE 92

Graduates' Reasons for Accepting First Employment Outside of Specialization

Reason	Responses (%)[a]
No employment offered in field of carrera	71
First employment offered	29
Employed in field while a student and continued in it after graduation	21
Importance of carrera not known	5
Received higher salary than that available in specialization	5
Employers in specialization believed graduate was inadequately prepared	4
Did not accept employment in specialization because of poor compensation or did not like carrera	3
First field of employment gave greater prestige	1

[a] Responses numbered 131. More than one reason was sometimes indicated; percentages thus total more than 100.

More than one-fourth of the respondents had accepted their first offer of employment even though it was not in their specialization (Table 92). A more detailed study of the experience of graduates could delve further into these reasons. For example, how long did graduates try to obtain employment in their field of specialization before deciding to seek or accept employment in an unrelated occupation? How many of those who accepted the first offer of employment could actually afford to wait any longer to obtain employment?

Current Employment

At the time of the inquiry in December 1969, 84 percent of the respondents were employed.[2] Unemployment was especially high among graduates in agricultural technology and home guidance--more than 30 percent of the respondents in each of these specializations. The majority of graduates who were not employed completed their university studies in 1969. A number were full-time homemakers, and several were fully committed to continuing university studies.

The principal form of employment for the Center graduates was governmental service (Table 93).

TABLE 93

Current Employment of Graduates

Type of Employment	Graduates (%)[a]
Public employees	55
Private employees	33
Self-employed	7
Public employees and also private employees or self-employed	2
Not known	3
Total	100

[a] Sample numbered 203.

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[2] The quarterly average rate of unemployment in Greater Santiago in 1969 was 6.2 percent, according to studies by the Institute of Economics, University of Chile. From "Informe Económico," El Mercurio, April 30, 1970, Santiago, p.9.

It is not uncommon for a Chilean to have more than one job. The income of one full-time salary-earner usually is not adequate to maintain an ordinary family at a moderate level of living. Nearly one-fifth of the currently occupied or employed graduates were filling two jobs, but 81 percent of the employed group held only one position. More than one-fourth of those employed (27 percent) were serving as supervisors or as chiefs of a department or section; 3 percent were owners of an enterprise; and 70 percent did not carry any supervisory responsibilities. Slightly more than 16 percent of the employed graduates said their principal position was temporary or contractual while 83 percent had a principal post which they regarded as permanent. Eighty-six percent were employed 30 or more hours weekly (Table 94).

TABLE 94

Time Devoted to Principal Employment

Hours per Week	Graduates (%)[a]
1-9	2
10-19	3
20-29	4
30 or more	86
Not specified	3
Not known	2
Total	100

[a] Sample numbered 203.

Employment in Selected Carreras

Enrollments in nine selected carreras in 1967 constituted 64.8 percent of the total enrollment, and 1969 graduates in these carreras comprised 83.4 percent of the graduates from the eight Centers (Table 95). For all nine carreras combined, 54 percent of the graduates were public employees.

Supervisory positions were held more commonly by graduates in certain carreras: 8 of 15 employed respondents from food technology were in supervisory roles; nearly one-half of those in administration and nutrition occupied supervisory positions; and about one-fourth of those in agricultural technology and public administration held similar posts. Agricultural technology and home guidance had a large minority of graduates in temporary positions, which confirms the precarious nature of employment in these two fields.

TABLE 95

Type of Employment by Selected Carreras

Carrera	Number Employed					
	Public Employee	Private Employee	Independent	Unemployed	Not known	Total
Agricultural technology	15	10	9	17	5	56
Administration	17	14	2	2	-	35
Home guidance	9	5	1	7	-	22
Elementary school teaching	15	4	-	1	1	21
Food technology	3	10	2	2	-	17
Public administration	10	6	-	-	-	16
Nutrition and dietetics	11	-	-	2	-	13
Drafting technology	4	5	-	2	-	11
Chemistry technology	2	5	-	-	-	7
Totals	86	59	14	33	6	198

cultural technology, home guidance, social work assistance, administration, and chemistry technology. It was reported that 95 percent of the 398 graduates in the two-year program of primary school teaching were employed in schools, and more than three-fourths of the 160 graduates in the other five carreras were working. The majority were employed by various governmental institutions, including the Ministries of Education and Public Works, National Health Service, Corporation for Agrarian Reform Institute of Agricultural Development, and railroad, steel, electric power, and maritime corporations of the state. The University of Chile employed a number of chemistry laboratory technicians and social work assistants. Nine were engaged in further study, and eight others were not employed. Data were not available concerning seven percent of the graduates in all six carreras (U. de Chile, DCCU, 1966b, pp.23-26).

An earlier report of the employment of graduates provides some basis for comparison with these results. According to the coordinating department of the University Centers in 1966, 90 percent of the 558 graduates from Temuco and La Serena were employed. The graduates had completed carreras in primary school teaching, agri-

Relationship of Employment to Professional Preparation

An analysis was made with the assistance of specialists to determine whether the jobs of graduates, as they described their duties, were representative of occupational objectives of the carrera, related to the carrera, or not associated with the carrera. Responses from graduates in administration and drafting were not included and responses of graduates in medical administration assistance were added (Table 96). Considerable variation was evident within individual carreras. However, seventy percent of the responding graduates in the eight carreras were in employment fully associated with, or partially related to, their respective carreras. Although these data are less sanguine than the opinions of carrera heads, the results compare to the composite observations of the graduates themselves.

TABLE 96

Relationship of Graduates' Employment to Objectives of Carrera, by percentages

Carreras	Totally Related	Partially Related	Not Related	Not Employed	Total[a]
Agricultural technology	46	15	9	30	100
Home guidance	32	18	18	32	100
Elementary school teaching	71	10	14	5	100
Food technology	65	--	23	12	100
Public administration	69	25	6	--	100
Nutrition and dietetics	85	--	--	15	100
Chemistry technology	100	--	--	--	100
Medical admin. assistance	29	29	14	29	101[b]
All selected carreras	57	13	11	19	100

[a] Sample numbered 159.

[b] This percentage total results from the rounding of figures for individual items.

The respondents themselves were asked their opinion of the relationship of their present employment to their specialization, as well as the extent to which they had followed their profession since graduation (Table 97). A considerable difference is apparent when the beliefs of graduates are compared to those of heads of carreras having graduates. Nearly two-thirds of the responding chiefs declared that all of their graduates had obtained employment in their fields of specialization. Table 97 indicates that one-half of those

TABLE 97

Graduates' Opinions of Relationship of Employment Specializations

Opinions	Graduates (%)[a]
Studies in accord with employment requirements	50
Studies below level of employment requirements	22
Studies more advanced than necessary	16
Studies not applicable to demands of employment	12
Total	100

[a] Sample numbered 154.

graduates considering their work related to their previous study believed that their studies in the carrera were in accord with the requirements of their employment. Those graduates in food technology, home guidance, and medical administration assistance were in the majority of those (22 percent) believing their studies inadequate. The majority of those in administration expressed the opinion that their studies had been above the level of requirements on the present jobs. The reactions of heads of carreras varied considerably from those of the graduates (Table 98).

TABLE 98

Carrera Heads' Opinions of Relationship of Carrera to Employment

Opinions	Carrera Heads (N)
Employment requirements above graduates' competence	1
Employment requirements equal to graduates' competence	13
Employment requirements below graduates' competence	4
Not reported	1
Total	19

A greater proportion (68 percent) said that carrera training was commensurate with employment requirements. It was not feasible to obtain opinions from employers of graduates. In any event, it would be more fruitful for such contacts to be made through systematic studies by staffs and students.

Reference has been made to the necessity for an appropriate university title as a qualification for entrance into a field. Employed graduates were asked whether their degree or title was a prerequisite for employment in their current position; 53 percent replied, yes, those from nutrition and chemistry technology being unanimous. A majority of graduates in administration, public administration, and home guidance replied negatively, as well as nearly one-half in agricultural technology. A heavy proportion of negative responses indicates that many graduates are occupying positions which do not require their degree of competence, or that the university degree is not a basic requirement for employment in intermediate-level professional occupations.

Continuity of Employment in Professional Fields

Nearly one-third of the responding graduates have followed their specializations continuously since graduation from the University of Chile (Table 99).

TABLE 99

Graduates' Opinions Concerning Continuity of Specialization in Employment

Opinions	Graduates (%)[a]
Followed it continuously	32
Followed it the major part of the time	15
Followed it half of the time	9
Followed it less than half of the time	13
Never followed it	30
Not reported	1
Total	100

[a] Sample numbered 241.

This group was nearly evenly divided between those completing studies in 1969 and those graduating in 1968 or earlier. Two-thirds never entered the occupational field for which they prepared, or they had on one or more occasions stopped working in their specialization. It cannot be assumed that all students who complete a given carrera will have a lifetime career in it, or will be able to do so, but, the relationship between university specialization and future employment is significant for educational planning and the development of human resources. Within individual carreras, the situation is more disturbing. In five of the nine carreras which were separately analyzed, the majority of graduates followed their specializations half of the time or less since graduation. The principal reasons were unemployment and work available in another field. The exception was administration, in which many graduates continued to work in the same occupation in which they had been engaged as students--presumably not related to administration. It may be inferred then that students sometimes specialize in what is available, rather than in what may be of interest to them. In elementary school teaching, food technology, nutrition, and chemistry technology a substantial majority has been employed all or a greater portion of time since graduation. Even in these instances there is little reason for complacency. However, the lack of continuous employment in intermediate-level careers is by no means an indictment of the Regional Centers. If an occupational niche in the economic structure is new, or controversial, professional preparation is less likely to be precisely related to actual requirements. Much more needs to be known about the effective and potential demand for manpower in many occupations below the higher professional levels. The point remains that trained professional men and women are being wasted, even frustrated, in an economy searching to increase its productivity, and the need is urgent for further analysis of the situation.

Place of Residence and Employment

The location of employment for graduates of the Centers is related to population movements, plans and realities of economic development, and the programs of the campuses of the University of Chile in the provinces. The Centers in the provinces were designed to decentralize the university and provide increasing opportunities for higher education outside the metropolitan area; to offer an educational program serving regional needs; and to prepare professional men and women to meet regional occupational needs as well as to contribute to the social and cultural development of the provinces. With rapid urbanization of the Chilean population, especially within the Santiago metropolitan area, many supporters of the regional institutions expected them to counteract the tendency of young people in the provinces to seek further education in Santiago. The belief was that, once a young person went to Santiago to study, he or she rarely returned to the family home in the provinces. Residents in the provinces are well aware of the cultural and economic importance of having their young people live permanently in the provinces.

The permanent residence of students enrolled at the Regional Centers in 1966 provides a comparable base to analyze the location of graduates in 1967, 1968, and 1969. Data from the University of Chile in 1966 indicate that 41.4 percent of the students at five reporting Regional Centers came from the cities where their respective campuses were located. The situation varied considerably in the individual Centers, ranging from 39.0 percent at Temuco to 52.9 percent at Antofagasta. Using the provinces of the Centers as a reference base, the 1966 data show that 63.4 percent of the students had their permanent residence in the province of their respective institutions, ranging from 49.4 percent at Talca up to 78.9 percent at La Serena. Approximately 85 percent of the students lived in the service zones of the respective campuses, while 4.5 percent listed Santiago as their family residence. For the individual campuses, this percentage varied from 1.8 at Osorno to 6.0 at La Serena (U. de Chile, Instituto de Invest. Estadísticas, 1966a, pp.137-143). With these 1966 data as a base, the graduates' locations for first and current employment have more significance (Table 100). The figure of 44 percent exceeds the proportion of students in 1966 whose permanent residences were in the same city where their respective Center was located. Comparing the data for residence and for current employment, it appears as if

TABLE 100

Location of Employment of Center Graduates

Location	First Employment (N)	(%)	Current Employment[a] (N)	(%)
Same city as Center where studied	90	41	89	44
Other locations of same province as Center where studied	17	8	21	10
Other provinces	83	38	89	44
Other country	1	--	--	--
Not reported	27	13	4	2
Totals	218	100	203	100

[a] Some of this group did not report the location of their first employment.

the Center provinces as a group proportionately do lose some of their graduates. Expressing the estimated loss to the Center provinces in relative terms, and assuming that a substantial majority of graduates who were not employed were residing in the Center provinces, the drain of graduates from their respective Center provinces was approximately 10 percent. It should be remembered, however, that 38 of the total sample (16 percent) were not employed at the time of this inquiry. If all graduates were to obtain employment in the same province as their respective Centers, or in other provinces, the conclusions would vary in accord with the new distribution. Possibly the percentage of graduates who would be located in the Center provinces would reach, or even exceed, the proportion of the Centers' students derived from the respecitve Center provinces.

Approximately 61 percent of currently employed graduates were employed in provinces where Centers were operating, a figure substantially higher than that in Table 100 for those working the the provinces of Centers where they had studied. It more nearly approaches the 63.4 percent of students who in 1966 came from the immediate provinces of the Centers, indicating that some graduates who have studied elsewhere do later return to their home provinces. Indeed, the drain of graduates from the provinces appears to be no more than three percent, provided a goodly majority of those not working remained in their home province.

A review of the responses from currently employed graduates show that 82 percent of the group were working in the service zone of one of the Regional Centers, a proportion slightly below the 85 percent of Center students who in 1966 came from the respective service zones. Thus the loss of graduates in the Centers' service zone has been approximately three percent, as well. Again the assumption is that a majority of the graduates who were not working remained in the service zone of the Center. Seventeen percent obtained first employment in Santiago province; of the currently employed, 15 percent were working in Santiago. The balance of those employed, apart from the service zones of the Centers, were in the provinces of Valparaíso, Aconcagua, and O'Higgins, near metropolitan Santiago. The proportion working in Santiago province considerably exceeded the 4.5 percent of the Centers' 1966 enrollments who came from that area.

Although the 1966 data are more suitable for this analyses, recent enrollment trends in the Regional Centers show an increasing proportion of students who have come from Santiago. For example, nine percent of the entering students in 1967 matriculated from the province of

Santiago. For the individual Centers, the proportion ranged from 5 percent at Temuco up to 21 percent at La Serena. This upward shift will affect the percentage of future graduates who seek employment in the capital. According to the base data for 1966, approximately 11 percent of students at the Regional Centers had family residences other than in the service zones or Santiago. When it is economically feasible, province students frequently complete their secondary school studies in Santiago; it is quite possible, therefore, that more than 4.5 percent had graduated from secondary schools in the capital province in 1966. While Santiago did attract graduates from the provinces, if employment opportunities had been better even more would have gone.

Substantial variations were apparent in the employment location of responding graduates from different carreras. A majority of graduates in administration, elementary school teaching, and drafting remained in the same city or province as their respective Centers. Those in home guidance and nutrition divided about evenly between the province of their Centers and other provinces. Graduates in agricultural technology, food technology, chemistry technology, and medical administration assistance tended, for the most part, to obtain employment in other provinces.

In Chile, family ties reputedly are strong, so that graduates may not wish to leave their home communities in order to secure suitable employment. Moreover, salary and living costs are determinants in accepting or seeking employment in a strange environment. Certainly, guidance and occupational information services in the Centers and within carreras could be useful to graduates pondering these problems.

Earnings

Salary incomes of university graduates may be one basis for determining the economic value of higher education. A more significant determinant may be to analyze the contribution of education to the nation's rate of economic growth. Selowsky's (1967) findings suggest that the contribution of education to economic growth has been rising in Chile. It would be premature to generalize upon the value of higher education from income data of University Center graduates over a period as recent as 1967-1969. Their real incomes may rise considerably during the balance of their working careers, but available evidence is not conclusive on this point. Nor is there yet evidence in Chile that extending opportunities for higher education to more and more students will result in proportionate increases in the rate of economic growth (see Carnoy and Selowsky studies, Chapter 10), but these data can suggest the incentives which the Chilean economy offers to those training for professional services.

Table 101 indicates that approximately 10 percent of the graduates received monthly earnings of 2,500 escudos or more in 1969 (equivalent at that time to approximately $245 U.S.), while more than one-third were earning less than 1,000 escudos monthly for full-time work. The median was 1,255 escudos (approximately $125 U.S.). Male graduates earned considerably more than female graduates. Perhaps the salary differential is based upon occupational status, rather than sex discrimination. Salaries of graduates in elementary school teaching and home guidance tended to be lower than those in agricultural technology and administration. Graduates in the latter field, incidentally, reported a median monthly salary of 2,186 escudos, well above the median for the entire group.

TABLE 101

Monthly Earnings of Full-time Employed Graduates, 1969

Monthly Earnings (in escudos)[a]	Responses[b]	
	(N)	(%)
499 or less	8	5
500-999	49	31
1,000-1,499	43	27
1,500-1,999	22	14
2,000-2,499	12	8
2,500-2,999	7	4
3,000-3,499	5	3
3,500 or more	4	3
Not reported	8	5
Totals	158	100

[a] 10.19 escudos = $1.00 U.S., official rate of exchange in Santiago, midyear 1969.

[b] Only those graduates who held one position are included.

In view of the low rate of economic growth in Chile during the past few years, it would be premature to make severe judgments of the economic welcome which Chile is giving to graduates from the Centers in the provinces. In any economy, a direct relationship tends to exist between productivity and earnings. In a developing country, disparities frequently arise between the effective demand for qualified manpower and the actual supply of trained men and women in specific fields. The problem may be one of "over-education" for current realities, or underemployment in a qualitative sense, or that the quality of training in some fields may not be commensurate with the requirements of the employers.

The heads of carreras were asked whether the remuneration which their graduates had received was commensurate with the quality and level of their professional preparation. Half of the respondents replied, "Yes, in the majority of cases"; the remainder were about evenly divided between, "Yes, for half of the graduates," and, "Yes, for the minority."

The base monthly salary of a beginning full-time instructor at the University Centers in 1969, including allowances for a university degree and for being a public employee, was 1,685 escudos. This was considerably above the median for the University Center graduates, who, for the most part, studied three years for the university degree while instructors studied five. Considering the general salary levels in Chile, it seems as if young Center graduates receiving the median level of 1,255 escudos were doing fairly well on a comparative basis.

INTERESTS AND OPINIONS OF GRADUATES

Educational and Civic Interests

At the elementary and secondary levels adult education has increased considerably in recent years, and programs for vocational education have expanded under the auspices of the Ministry of Education. At the professional level, the need is recognized for refresher courses, specialized seminars, and continuing education; however, little has been done to attract professionals for these programs. The notable exception is teaching, in which extensive up-grading programs have been offered to teachers who either have not been fully qualified or have needed reorientation to the curricular changes of educational reform.

The sampling of graduates were asked "Which subjects would you like to study at present in order to perform better in your profession?" Eighty-six percent of the group replied that they felt the need for more professional studies, general studies, or both--the majority expressing interest only in professional studies (Table 102). The graduates specified particular subjects which they wished to study, and after consultation with Chilean specialists, these subjects were classified as professional or general studies. The

TABLE 102

Graduates' Current Study Preferences

Types of Studies	Graduates (%)[a]
Professional	55
General	5
Professional and general	26
None specified	14
Total	100

[a] Sample numbered 241.

responses indicate a high level of interest in continuing education. These replies should not be construed as implied criticism of the training received in the provinces, but rather, as a prevalent feeling among professionals of the need for supplementary education.

Graduates were also asked to express their interest in participating in activities offered in a nearby university. Fifty-six percent said that studying was their primary interest. Their second choice (46 percent), well behind the primary interest, was discussions with professors or specialists about professional development in various specializations. Other university activities appealed much less to the graduates. In order of priorities, the graduates listed the following areas of interest: conversations with other students; use of the university library; occasional discussions with graduates in subjects of mutual interest; meetings about community or national problems; participation in community action programs under the auspices of the university; and attendance at concerts, theatrical productions, exhibitions, or other similar activities.

In spite of the emphasis which a number of the Centers give to cultural activities in the community, the graduates consider them to be a low priority. Economic necessity and professional advancement apparently are more pressing than social or cultural activities.

The civic interests of graduates, as indicated by their activities in the community, suggest some influence which the Regional Centers have had upon their students and respective regions. Participation in community affairs may or may not be traceable to the educational influence of the Centers; 33 percent of the 241 responding graduates said they had participated in some civic or cultural activity in the community during the past year, and 66 percent had not participated (one percent did not reply). Activities of this kind varied considerably and some graduates engaged in more than one activity (Table 103). These responses do not indicate any intensity of involvement; it could have been occasional, frequent, or continuous. For recent graduates facing many new personal and economic problems, it seemed important to know only whether community participation of some kind had occurred.

TABLE 103

Forms of Graduates' Participation in Community or Cultural Activity During the Preceding Year

Activities	Graduates (%)[a]
Educational, cultural, or sports programs; courses, seminars, conferences	33
Cultural affairs; forums and discussions (as spectator or without mentioning responsibility assumed)	21
Neighborhood organizations, or in programs of welfare or social action	23
Election campaigns of community or university personnel	18
Professional associations or Regional Centers as advisor and/or member	15
Studies	4
Other	3
No response	5

[a] Total of percentages exceeds 100 because some graduates registered their participation in more than one activity. Sample numbered 80.

Opinions about Regional Centers

Graduates of the Regional Centers were asked to comment on the positive and negative features of their studies, or any favorable or unfavorable aspect of their Centers, and to suggest means by which services of the institutions could be improved. The comments were distributed either positively or negatively in relation to their studies: 10 percent gave only positive comments; 5 percent only negative; 80 percent gave mixed comments; and 5 percent did

TABLE 104

Graduates' Opinions of Center Studies

Positive and Negative Comments	Graduates (%)[a]
General education	
Provided knowledge of society; general culture	36
Gave knowledge of basic sciences	2
Gave knowledge of instrumental subjects	4
Offered program for personal development	15
Deficient in general and cultural education	6
Deficient in instrumental subjects	2
Professional education	
Gave satisfactory preparation	23
Provided training for a career, in order to secure employment and economic stability	24
Offered professional preparation, theoretical and practical	12
Resulted in university title; status as a university graduate; social status	9
Deficient professional preparation; lack of research and practice; much theory and little practice	34
Lack of courses; superficial courses	16
Lack of courses or carreras for continuing study	17
Inadequate duration of studies in carrera	4
Difficult to apply knowledge in profession	5
Lack of concern and ignorance in community of importance of programs in Center	4
Lack of prestige of carrera; little recognition of university title	3
Lack of employment in specialization	21
Lack of planning in relation to reality and necessities of region	2
Does not meet needs of country for training in specialized fields	9
Other areas	
Improved service to the community	4
Poor quality of teaching: lack of preparation, experience, and responsibility	16
Lack of resources: teaching and library materials, shops	8
Poor quality of students; poor preparation	2
Unsatisfactory resources	6

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[a] Sample numbered 241. Percentages total more than 100 because a number of ideas were offered that were classified under more than one subject.

not respond.

Most of the statements about studies at the Centers may be classified under general education or professional education (Table 104). It is apparent that some graduates chose to comment favorably upon some feature, while others viewed the same feature with disfavor. A positive comment about providing knowledge in the basic sciences, for example, might be offset by a negative comment on the quality of materials or teaching in those subjects. Graduates' comments concentrated around their carreras, and critical comments occurred more frequently than did favorable observations. More than one-third said that their professional preparation was weak, especially in research and in application of theory to practice, although approximately one-fourth gave a complimentary appraisal of their studies. Approximately one-half of the graduates offered an appreciative, positive comment regarding general education, including instrumental studies in Spanish and foreign languages. The Regional Centers have given much attention to balancing the relation between theory and practice. In responding to a structured question, with four choices, more than two-thirds of the respondents agreed that studies in their respective carreras emphasized comprehension of theory and its application to practical problems. This is an impressive testimonial, notwithstanding that a considerable number of graduates agreed with more than one alternative (Table 105). The alternatives were not mutually exclusive, if one considered all courses in a given carrera. When two responses were registered, the most frequent combination was that

TABLE 105

Graduates' Opinions of Carreras

Predominant characteristics	Agreed (%)	Disagreed (%)	Did Not Respond (%)	Total[a] (%)
Studies were abstract and removed from problems of real life	22	57	21	100
Studies emphasized memorization of facts and theories	32	48	20	100
Studies emphasized comprehension of theory and its application to practical problems	68	18	14	100
Studies gave much more attention to practice than to theory	19	54	27	100

[a] Sample numbered 241.

which included comprehension of theory and emphasis upon practice. Experiences of students in different courses within a carrera, and in various carreras, are likely to vary considerably. Graduates generally referred to problems and weaknesses, which is consistent with most professional groups who rarely waste time congratulating themselves or commenting upon what they are doing well. The principal recommendations were that the Regional Centers should be able to develop, become more effective, and grow.

General comments about students, resources and organization of the Centers, and the community show a wide range of responses (Table 106). While inadequate financial resources and poor teach-

TABLE 106

Graduates' General Comments about the Centers

Positive and Negative Comments	Graduates (%)[a]
Students	
Relations between students and instructors are harmonious	3
Benefit to students in the provinces, especially to students lacking in resources and unable to travel	8
Increased opportunity for entrance to University; new opportunities to study general education and to specialize in new carreras	8
Lack of contact between students and instructors; treatment of student secondary; problems of service to students in fields of guidance and student welfare	8
Conflicts among groups; excessive politicization and conflict	8
Resources and organization of Centers	
Centers have trained teachers with desire to improve	7
Organization, administration, and operations of Centers are generally satisfactory	2
Lack of resources and budget; poor distribution of resources in the University	31
Lack of quality in teaching; inexpert	30
Lack of personnel	10
Problems in organization and development of Centers	11
Community relations	
Center raises cultural level of community	4
Center satisfies needs of the zone; gives programs that were lacking	7
Center lacks contact with community; lacks program of extension	14
No response	5

[a] **Sample numbered 241. Percentages total more than 100 because some responses were classified under more than one subject.**

ing are mentioned most frequently, there is a lack of any heavy concentration upon a single problem. Some evidence of diverse opinions appears; for example, seven percent said that their respective Centers had trained teachers with a desire to improve, but nearly one-third observed that teaching was poor.

SUMMARY

The total number of graduates from 1961-1969 was 2,866; 58 percent were women, who comprise about 60 percent of the total enrollment of the campuses in the provinces. Within the 1967-1969 university reform period, the Regional Centers recorded variable increases, 306.5 percent of graduates in one year. This was a reflection of the completion of three-year carreras established in 1965 at four campuses. In 1968 and 1969, the annual increases of graduates were 22.6 percent and 37.7 percent, respectively.

Higher education in Latin America and Chile has emphasized professional preparation in various fields. Consequently, the inquiry of the sample of Center graduates was devoted in large part to the relationship of professional preparation and employment. Ninety percent of the respondents reported that they had been employed some or all of the time since their graduation. Fifty-two percent of the sampling were first employed in their specialization. Generally, the majority of graduates who were not first employed in their field of specialization declared that they could not find employment in their specialty.

At the time of responding to the inquiry, 84 percent of the graduate sample were employed. The remaining 16 percent were full-time homemakers, continuing students, or unemployed. A majority of the employed graduates were public employees. High proportions of unemployment were in home guidance, agricultural technology, and medical administration assistance. A considerable minority of the employed group occupied two positions, and a fourth had supervisory responsibilities. The great majority held full-time jobs.

Nearly one-third of the responding graduates had been employed in their profession continuously since their first employment after graduation, but thirty percent of the sampling had never been engaged in the specialization which they studied at the Centers. A substantial majority of graduates from the carreras of chemistry technology, elementary school teaching, food technology, and nutrition had been employed in their specialization all or a greater part of the time since their graduation. Most employed graduates in a number of carreras were in public employment, while the majority in several technical specializations were in private or independent employment.

The employment record of graduates is by no means bleak. Considering the newness of the University Centers and of many of the carreras, the data evidence courageous planning and persistent effort by students, graduates, instructors, administrators, and coordinators. The problems of graduates most prominent in these findings are those of failure to find employment in their specialization and the related necessity of accepting employment in another field.

Considerable correlation is evident in the views of carrera heads and graduates. Two-thirds of the sampling of heads, including only those whose carreras had produced graduates, expressed the belief that all graduates had been employed in their specializations, and the remaining third said the majority had been. In the sampling of graduates, 64 percent said that they were employed in their specialization. A difference of perception between carrera heads and graduates appears when a comparison is made of professional requirements of specializations in practice and carreras studies of the Centers. Two-thirds of the carrera heads said the professional studies and the requisites for employment were in accord, while only approximately half of the employed graduates agreed.

The location of the current employment of responding graduates indicates that approximately 3 percent loss of graduates occurred in the Center provinces (provinces in which Centers are located) as a group, in comparison with the proportion of enrollment from the same provinces. Coincidentally, the same degree of loss, or drain, is evident in comparing the geographic origin of student enrollment and the location of employed graduates in relation to the service regions of the Centers.

By noting relationships between geographic origin of students from the respective Center provinces and the employment location of graduates who studied there, it appears as if the drain of graduates from their resident Center provinces to other regions has been about 10 percent. It is important for regional development to retain a reasonable proportion of Center graduates in the provinces, but not necessarily retaining them in their own home provinces. The residence of Center graduates is likely to be a function of available opportunities for employment in their specialization, alternative opportunities, salary levels, and location of the family residence.

Distinctive employment patterns are evident among graduates of different carreras. Graduates in food technology, chemical technology, medical administration assistance, and agricultural technology tended to obtain employment outside the Center provinces, while those in elementary school teaching, administration, and drafting tended to remain in the Center cities or provinces. Employed graduates in nutrition and home guidance were evenly divided between the provinces and other areas.

Median earnings of responding Center graduates were 1,225 escudos monthly, but 36 percent of the graduates were earning under 1,000 escudos monthly, while 15 percent were receiving 2,500 or more. Graduates in administration and agricultural technology earn more compared to those in elementary school teaching and home guidance; women's salaries were lower than men's, a differential reflecting, perhaps, occupational status, or sex discrimination, or both.

Most responding graduates indicated a desire to continue their studies for self-betterment and professional development, not necessarily within sustained and intensive programs of graduate study. They also reported a wide range of participation in community affairs during the preceding year, although, the findings do not indicate the intensity of involvement.

Graduates' opinion was divided among favorable comments on general education, including the courses in Spanish and foreign languages, and those who thought the professional preparation was weak, especially in research and in the application of theory to practice. A considerable proportion of graduates commented on the small number and superficiality of the courses in the carreras, but more than two-thirds of the graduates noted that their studies emphasized comprehension of theory and application to practical problems. Over a short period of years, the carreras have changed considerably; courses, instructors, and materials vary considerably among them.

Perhaps the most auspicious and significant feature of the inquiry of graduates was the constructive character of their responses and their obvious concern, even expectation, that the Centers would grow and become more effective as campuses of the University of Chile. Certainly, the graduates of the University Centers are a source of good will and potential service to the Centers of the University of Chile, perhaps to other institutions as well. They also constitute a substantial demand for continuing studies and extension services in a wide range of professional fields.

CHAPTER 9

RELATIONS OF THE UNIVERSITY CENTERS AND THEIR COMMUNITIES

The founding of the Regional Colleges resulted in an extension of new educational opportunities in the northern and southern zones of Chile. In addition to providing general and specialized education to the regular students, the new campuses were responsible for extension activities and technical assistance in regional development. It was expected that educational and cultural services would be conducted in collaboration with the department of extension of the university, presumably with regard to the interests of various regions. The educational and cultural promise of the colegios universitarios regionales, together with demand in the provinces for institutions of higher education, formed a strong base for public support in establishing the Regional Colleges.

CONTRIBUTIONS OF COMMUNITIES AND REGIONS TO THE UNIVERSITY CENTERS

During the planning and developmental period of the colegios regionales, officials, leaders, and groups from many communities and provinces demonstrated a will to obtain an institution of higher education in their respective areas. In 1960, the university in Santiago was greatly limited for students from the provinces; scholarships or loans were generally unavailable, student residences were nonexistent, and the cost was usually prohibitive. Regional groups were aware of the prestige and cultural stimulus that a new institution of higher education would bring to them, as well as appreciative of the increasing importance of higher education in Chilean development. For parents and teachers, the chief motivation for creating the Regional Colleges was their function in facilitating the upward social mobility of young people. Without higher education very few, if any, could hope to attain economically or socially a scale of living above that of their parents.

Considering requests for Regional Colleges from various localities, Rector Gómez Millas conferred with parliamentarians, *intendentes* (governors of provinces, appointed by the President), *alcaldes* (mayors), and other community leaders. Political pressures and the probability of future financial support by the national government were important. Several more specific criteria were established: first, the community and adjacent areas had to have sufficient secondary school students to assure substantial attendance at the new institution; second, the prognosis of regional development should be favorable and indicate continued need for a Regional College; third, the community should offer certain conditions in order to secure university approval, such as a supply of good teachers, a helpful and interested populace, a willingness and ability to contribute land and funds, and an economic life which would provide employment for graduates (Juan Gómez Millas, interview, Santiago, Feb. 18, 1970). Rector Gómez Millas concluded that Temuco, La Serena, Antofagasta, Talca, and Osorno initially fulfilled these requirements; the University Council approved Arica, Iquique, and Chillán as additional locations for Colleges, but each of these choices was affected by local circumstances and custom (see Chapter 1). For some time during the formative years it was expected that a Regional College would be established at Santiago, but internal opposition from professors and faculties of the university, and the dearth of competent instructors, eventually quashed that idea.

The zest and enthusiasm of communities in the provinces were remarkable. Public meetings, conferences of community leaders and university educators, banner headlines in the local newspapers, and dramatic ceremonies of welcome and endorsement characterized the preliminary activities which led to the creation of Regional Colleges in various localities. The general pattern of activity and the degree of involvement were similar in all cases, but, owing to differences in local situations, the characteristics of community support varied somewhat in the respective communities. Notable illustrations of desire, perseverance, and support were the activities at Temuco, Talca, and, subsequently, at Chillán. Temuco offered an auspicious setting for the first step. Situated on the old Chilean frontier, it was a relatively new community with only eighty years of history. There, it was expected that most students would come from middle- and low-income families. Leadership in seeking an institution of higher education came from many groups: the mayor and other officials of the municipality, the Rotary Club, the Committee for Progress, teachers, other professionals, and many others. Doubtless, community interest in a public institution of higher education was stimulated by the founding at Temuco in 1960 of the University of the Frontier (*Universidad de la Frontera*), an institution affiliated with the Catholic University at Santiago. The Regional College of the University of Chile began instruction in 1960 in classrooms of the *Liceo de Hombres*, a public secondary school. The Municipality of Temuco ceded land to the new establishment in the center of the city, valued at 80,000 escudos. Reflecting a lively interest in the intermediate-level carreras of the College, the Minister of Education transferred the building and facilities of a former agricultural school on the outskirts of Temuco, and donated 15 *hectares* (150,000 square meters) of the surrounding farm lands for the construction site of the College (U. de Chile, DEG, 1962b).

Residents of Talca contributed 100,000 escudos to assist in the establishment of the College. Many workers gave one day's wages; bank employees, florists, labor unions, the Association of University Professionals, and neighborhood groups made donations. The municipality of Talca pledged 48,000 escudos in order to finance advanced studies for instructors in the College, and a considerable number of scholarships were provided.

The profound involvement of people in Ñuble province warrants a description of their later campaign for a Regional Center at Chillán. Activities were similar to those previously carried on at Talca. In 1965 the Federation of Students of the province of Ñuble launched a campaign for a colegio regional or a centro universitario. At one meeting attended by five thousand students, those participating were regional deputies to the national congress, a representative of the intendente, the alcalde, local educators, and student leaders.

Having received encouragement from Rector González, of the University of Chile, a Committee of Auspices for the University Center was elected at a public assembly of representatives from all sectors of the province. The people of the community gave the University of Chile the responsibility for organizing and directing the proposed institution. Committees were then formed to concentrate upon the financial drive, the quest for land, and technical problems. Dozens of meetings throughout Ñuble brought together neighborhood associations, mothers and their children, labor unions, business and professional groups, governmental agencies, agricultural bodies, cultural societies, and other associations in order to plan their contributions toward the University Center. The Chillán newspaper, La Discusión, included extensive and detailed reports of the campaign for the Center. More than 200 organizations contributed to the funds to establish the Center, including members of the Union of Municipal Workers throughout the province, employees at the Liceo de Hombres, Mothers' Centers (Centros de Madres), the Federation of Educators, regional staffs of CORFO and the National Health Service, the chamber of commerce, employees of individual firms and agencies, the Lions Club, neighborhood organizations (Juntas de Vecinos), sports and garden clubs, police, prisoners in the local jail, a military regiment, church groups, school children, and even those receiving modest pensions because of age, invalidism, or widowhood. At the end of the arduous and comprehensive campaign, a total of 238,493.70 escudos had been collected, which was delivered to the University of Chile for the exclusive use of the Center at Chillán. Shortly after the establishment of the Center, the Committee of Auspices dissolved at the request of the director and in accord with the expressed wish of the student organization of the new Center.

Meanwhile, much of the efforts of the officials and leaders in the province were dedicated to securing passage of a national law which would impose a direct tax upon Ñuble residents for the support of the new Center. This was essential since university officials indicated that the additional campus could not be financed within the university's normal budget. This unusual commitment for local support, perhaps unique in Latin America, will be considered more fully in Chapter 10. When the Center of Ñuble began to function January 11, 1966, shortly after both houses of Congress passed the tax bill, Irma Sálas said, "Ñuble is an example for Chile and Latin America, since another case is not known in which all the citizenry has made possible, with their own internal effort, the development of higher education" (U. de Chile de Ñuble, 1968, Part 1, p.55).

With various modifications, other communities and regions have made substantial contributions to the founding and continuation of their respective Centers. Clearly, the interest, support, and tangible contributions of communities and regions were major factors in establishing the Regional Colleges, since it was not feasible for the university to assure the funding and sites immediately necessary, regardless of its commitment to decentralize its services throughout the country. Practically, it appears as if community endorsement and clamor were politically essential in order that the university might obtain and allocate funds from the national government. Certainly the university officials, especially the rectors and Dr. Sálas and her staff, worked effectively to encourage community backing and inform residents and students about the educational program of the innovative institutions.

Other forms of community support which have been important to the Centers have been cooperation of the press and radio media, availability of professionals as parttime instructors, participation of residents in Center programs, use of community resources as a field laboratory, and cooperation of educators and students in the secondary schools and other institutions.

CENTER PROGRAMS AND SERVICES TO THE COMMUNITY

Extension services in Chile include programs apart from the regular curriculum which serve or involve students and staff within the institutions, as well as those which reach or involve persons outside the institutions. Extension programs include cultural activities, professional development, studies of the regions, and projects for community improvement.[1]

Cultural Extension Program

Cultural extension services of the Centers have been attempts to reach all people in their respective regions; previous programs catered only to the cultural elite. The Centros Universitarios in the provinces have offered cultural activities such as concerts, plays, exhibitions, radio programs, forums, lectures, seminars, and short courses. For programs in the arts, the Centers at La Serena and Antofagasta respectively, have served extensively through programs of drama, ballet, and art. Often other Centers have functioned in cooperation with cultural organizations in the community.

A few examples of cultural activities from individual Centers will indicate the extent of the programs. In the Norte Grande (Great North) region of Chile, the collaboration in musical and theatrical presentations has been especially promising. At Arica, the Center has sponsored concerts and maintained a regular radio program. Joining with the University of San Marcos of Lima, the Arica Center gave an eleven-day International Winter School which offered thirty courses on a wide range of subjects. The program was sponsored by the Arica Council for Progress (Junta de Adelanto de Arica) and included a puppet theatre, an art exhibition, musical concerts, and the presentation of a dramatic comedy. Other recent activities included a Congress of Architects, a national convention of physicians and surgeons, and a seminar on tourism. Farther down the Pacific Coast in the same province, the Center at Iquique has conducted an evening workshop in art, a polyphonic chorus, a sports club, and a museum which is an important cultural asset to the school children and adults of the community. Other activities organized in 1969 at Iquique Extension were: five-week pre-university courses in biology, mathematics, and physics and chemistry for 80 high school students; a cooperative lecture series with the cultural center of Tarapacá; a poetry recital; choral concerts; lectures on contemporary Latin American literature; movies on Peru, Spain, and other European countries; and special courses in English for employed adults. Several of the programs in the fine arts were provided in cooperation with performers from the Centers at Arica and Antofagasta.

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[1] Details and examples of these activities have been obtained mainly through interviews in the Regional Centers, and by reference to local newspapers and to publications and documents of the Centers and the Technical Secretariate of the University Centers.

The Antofagasta Center in 1969 offered a series of choral concerts in the city and other localities of the northern zone. The theatre group includes adult residents of the area and has contributed substantially to the cultural life of the region. Other extension programs have been regional literary contests, seminars on regional problems, and collaboration with other cultural organizations in nearby cities. The residents of La Serena have received a rich variety of musical fare from the group productions of the regional conservatory of music, which is affiliated with the University Center there. During 1968, fifty performances were given in the provinces of Coquimbo and Atacama and in cities extending from Arica to Santiago. Several concerts were presented in Peru and Argentina. The symphony orchestra and the chamber music groups were the principal performers in this extensive schedule. Cultural extension activities also encompassed a brief winter school in the nearby city of Vicuña, lectures and discussions in the municipal hall of La Serena, and a national convention of writers.

An important activity at Talca in recent years has been the Spring School (Escuela Primavera), which consisted of twenty-eight different courses given in the evening hours over a period of three weeks in 1968. Some courses were: national and regional development, problems of contemporary education, organization of the family economy, militarism in Latin America, development and organization of communities, psychology of learning, insects as invaders of our time, and contemporary mathematics. Complementary activities included an entomological exhibit in collaboration with the Entomological Society of Talca; a round table discussion on the sociological aspects of university reform; special television broadcasts; and display and explanation of the physical plans for the development of the University of Chile. Enrollment fees were modest, and substantial discounts were given to university students and to students in the last year of secondary school. Major projects at the Ñuble Center in Chillán were the three-week seminar on Latin American problems, an extensive seasonal school at San Carlos in the province of Ñuble, and a six-day seminar on economic development. In 1967, the Temuco Center instituted the permanent school of cultural extension, which was designed to maintain a continuous university-community dialog. Extension courses have included psychology of the child, design of furniture, human relations, Chilean poets, science and social conduct, organization and administration of cooperatives, social security, and influence of parents in the vocational guidance of their children. The Temuco Center participated in international education week, a project of the coordinating committee of bi-national centers, in which movies, lectures, photographic exhibitions, and folklore programs of seven different countries were presented. At the Osorno Center, extension programs were offered in the arts and in conservation and development of the remote and diverse regions which that Center serves.

These summaries indicate the substantial efforts of most of the Centers to serve the cultural and educational interests of residents. The traditional concerns of the cultural elite--art, philosophy, and literature--have not been neglected, and considerable attention has been given to contemporary movements. In the arts a number of the Centers have enlisted the active engagement of adult residents and young students. Although limited severely by lack of funds and transportation facilities, exhibitions, concerts, and theatrical presentations have been carried to the plazas, the neighborhoods, and the smaller towns of the regions.

Professional and Occupational Development through Extension

By definition, all occupations which call for training and the rendering of public service may be considered professions. In Chile, the concept of a profession extends to any career for which university education is usually necessary.

Within the University Centers, a common practice is to proclaim a certain day or week of the year to honor those engaged in a given profession or carrera. For example, the day of the social worker at one of the Centers may have discourses by the director and the head of the carrera, perhaps a forum by students upon problems of juvenile deliquency, or other activities which the students organize. At Talca on the day of the agricultural technologist and the home guidance worker, students planted trees along the road leading to the Center. Less professional but equally enjoyable events on the day might be auto races and a fiesta.

Professional development for adult residents has been concentrated in teacher education, an emphasis which resulted from the expansion of elementary and secondary schools during recent years and structural changes introduced throughout Chile. Thousands of teachers have needed additional training, and during 1964-1966 the Ministry of Education financed a number of such training programs through agreements with individual Centers. Centers at Arica, Iquique, Talca, and Temuco participated in special training for teachers in grades 5,6,7, and 8 of the elementary schools and for teachers in the third year program of the secondary schools, sponsored by the Ministry in collaboration with the Technical Secretariate of the University Centers (U. de Chile, STCU, 1970, p.18). Courses of training have also been given to workers in the milk-processing and fish canning industries; small-scale farmers (campesinos) have been assisted in organizing and operating agricultural cooperatives in Chiloe province; a two-day seminar on cultivation and processing of crops was attended by farmers, agronomists, teachers, and students in Talca; Iquique offered special courses in English, programming, and technical subjects for radio announcers and technicians; lawyers, accountants, and bankers participated at the Osorno Center in a two-day legal conference; and Antofagasta collaborated with CORFO to schedule a seminar on administration for instructors and interested community residents. In late 1967, graduates in administration from the Temuco Center formed the Association of Administration Technologists of Cautín, which was a first step toward the creation of a professional association.

Regional Studies and Research

Some of the Centers, like Temuco and Talca, have taken steps to organize detailed information about the economic activities and natural resources of the regions (Riedemann, 1968). The Temuco Center formed a department of regional studies several years ago which has published a study of the natural resources of the provinces of Cautín and Malleco. Within the department of university extension of several individual Centers, an individual instructor has been designated as a coordinator of regional studies. The department at Santiago has fostered participation in regional studies by publishing a journal, Estudios Regionales, preparing proposals for seminars, and organizing written guides for studies of regional resources. Several seminars analyzing regional populations, social conditions, and industries have been presented with specialists and regional representatives from CORFO and ODEPLAN, staff members of the university in Santiago, and instructors from various Centers. One outcome of such a seminar on regional development in the province of Coquimbo was a publication, "Imagen de La Provincia, Agricultura y Minería," prepared by the teaching staff at La Serena. Elsewhere, third-year students in home guidance at Osorno completed a study of families, their living conditions, and their diets in four neighborhoods of the city of Castro in southern Chile, which was presented to officials and citizens of the region at a conference called for that purpose. Recently, a study of marine ecology was begun at Osorno.

Until recently research was not considered one of the Centers' functions. However, 30 percent of the sample of carrera heads in this study reported that instructors or students in their carreras had published or prepared multiple copies of recent studies. Now as sedes of the University of Chile, the regional campuses will be expected to carry on activities appropriate to the university's functions of teaching, extension, and research. The orientation of instructors to teaching and, in many cases, to community services is auspicious for the future development of community and regional studies. Special seminars on research methodology, supplemented by advanced training of instructors when feasible, would help improve the quality of future studies.

A number of Centers have demonstrated special interest in certain field studies and research. At Antofagasta, the departments of oceanography, seismography, and archaeology are affiliated with faculties in Santiago. The research activity in these fields appears to provide a stimulus within the Center itself, where a journal (Ancora-Revista de Cultura Universitaria) is published. Cultural history and archaeological findings are considerably appealing to the Centers, especially in the desert regions of northern Chile. The coastal regions, the Andean heights, and the great Atacama Desert have yielded a rich variety of artifacts telling much about the early societies of this area. In the south of Chile, near Temuco, the large remnant of the Auracanian (Mapuche) society calls for intensive study to better understand its problems and possible assimilation into the Chilean population. The Center at Temuco does teach the Mapuche language to interested students, and it has established a Center of Araucanian Culture through the cooperation of instructors in languages and the social sciences. Recently, the Temuco campus acquired a press, which should facilitate local research and dissemination. At Talca groups have studied mothers' centers in the Maule region, the personality characteristics of students from 8- to 15-years-old in the province, the ecology of mountain and plain areas, and of marine communities in certain lagoons. The director of the Center contributed to discussions of the regional development plan which regional representatives of ODEPLAN prepared in 1968. At Arica students and instructors collaborated in a survey of the population of Arica. Plants of the Iquique region were collected and classified there, a study of languages and communications in certain mountainous areas, and participation in an analysis of cultural and socioeconomic conditions of life in the northern zone were included in other Center activities. Often, the final theses of students in a number of carreras relate directly to problems or conditions of some aspect of community life.

Although all Centers have engaged in efforts to study the resources of their respective regions, they generally have not yet participated systematically in regional planning and development. Conferences and seminars might be construed as the forerunner of such activity. If regional planning does become a dynamic and integrated feature of Chilean development, the sedes of the university might make substantial contributions. The opportunity exists even now; according to John Friedmann (1969, p.39), Chile has at present one of the most advanced systems of regional planning in the world.

Projects for Community Improvement

Following several years of student promotion and participation in community projects, the federation of students and the rector of the University of Chile secured approval of the Superior Council in 1965 to form the department of social action for the purpose of organizing work projects during students' summer vacations. The idea was to involve students in the regions and communities that suffered from poverty and inability to solve basic problems of health, nutrition, sanitation, and drainage. The program signified the university's effort to collaborate in the integration of diverse groups of the people into the cultural and social life of the nation. The rationale was that students have the moral responsibility to aid others (Avendaño B., 1969).

Sometimes students became more politically oriented in their activities, but summer work projects were not likely to be sanctioned if they appeared to be ventures in political indoctrination. Restraint of work projects which are worthy in themselves could be more threatening to the freedom and services of the university than political activity which incidentally might occur.

The educational purposes of extension services and community improvement projects have not always been differentiated. Both are concerned with the quality of life in the regions which the Centers serve, but extension tends to concentrate upon cultural affairs and professional development, while community improvement programs focus upon improving the physical environment and the personal and social aspects of living in marginal localities or neighborhoods. For instance, at the Ñuble Center programs have included: inquiries to ascertain interests and needs for Center services; counseling in sex education at secondary schools of Chillán and Yungay; a developmental program on cooperatives in several communities; a health and physical education program; and a project in the Andean sector of Pichirrincón to aid families in nutrition, child care, home management, and conservation of food. At Antofagasta students in the social work carrera, in collaboration with the Center's department of social sciences and extension, have worked with families to improve living conditions in various villages (poblaciones) of the northern zone. The Center's Department of Health Sciences has cooperated with the national health service to offer health clinics and courses on health care in the city of Antofagasta. During the summers students and instructors have worked with fishermen and their families, providing instruction in cooking, home management, and operations of cooperatives. In 1968 the Talca Center introduced a comprehensive program in literacy, folklore, sports, popular concerts and plays, and short courses in home management, health, and agriculture to assist the people in the Pellehue sector.

Regional Center services may be provided to an organization in accord with a previous agreement, such as the La Serena Center's study of the utilization of certain marine products under the sponsorship of CORFO, or the Arica Center's service of testing materials for construction in the community.

Use of Community Resources

Students' field work often involves using land, facilities, equipment, and professional supervision outside the premises of the Center, especially in the carreras of nursing, social work, home guidance, nutrition, obstetrics, agricultural technology, administration, and teaching. Regional hospital directors have offered developmental field experience for students in the health occupations. Students at Talca in social work and home guidance assist local neighbors' centers (juntas de vecinos), and at Temuco they assist families, neighborhoods, and mothers' centers in home management and decoration, nutrition and budgeting, and group recreation. The students, who incidentally are prohibited from indicating in this field work any political party preference, also aid youth groups in planning sports activities and obtaining funds to finance them. At the Temuco Center it is expected that CORHABIT (Corporación de Servicios Habitacionales) will collaborate with the carrera in nursery school teaching to provide a nursery school program in one of the new housing developments. This will enable students to aid parents and children, while securing valuable teaching experience under the guidance of their instructors.

The Regional Centers also draw upon local resources by selecting as part-time instructors those who are fully employed in the profession. Local residents in various professions sometimes are invited to participate in seminars and students may make field visits to business and industrial enterprises in the region.

A majority of responding carrera heads evidently utilized community resources in their programs. Yet approximately one-fourth of the sample of carrera heads said that their instructors had not participated in teaching courses as a community service. Inquiry of the instructors themselves, including heads of carreras and departments indicated that 44 percent had participated in extension activities, exhibits, and research or advisory services in the community where the Center was located (Table 107).

TABLE 107

Instructors' Participation in Centers' Community Activities

Participation	Instructors (%)[a]
Teaching in extension program	13
Extension service, other than teaching	19
Research, including field studies	18
Advisory or consulting service	7
None	56

[a] Sample numbered 112. Percentage total exceeds 100 since a number of professors participated in two or more activities.

The carrera heads were asked to describe any field practice or other activity which required a direct relationship with the community. Nearly two-thirds of the 35 respondents said that their respective carreras included a program of field practice for qualified students (Table 108).

TABLE 108

Relationship of Carreras to the Community

Activity in Carrera	Respondents (%)[a]
Regular field practice by students as professional service in the community	66
Visits to enterprises and institutions	11
Collaboration in community programs	8
Summer field practice or special work	6
Special discussions of regional problems	3
Special services to the community	3
Other	3
No response	8

[a] Sample numbered 35. Percentage total exceeds 100 since a number of professors participated in two or more activities.

Organization of Extension Services

Even though the extension services encompass a broad area of activity in the Centers, their status in most of the Centers is precarious. The department of cultural extension at Santiago has been helpful in organizing comprehensive summer and spring schools at a number of Centers in recent years, but its commitments, perhaps unavoidably, have been sporadic, so that the Centers could not depend upon it for guidance and assistance from the university at Santiago. However, resourcefulness and creativity may have been encouraged by this situation, especially in collaboration with local organizations of children, youth, and adults.

At Antofagasta the extension program was organized under a coordinator who was assigned major responsibility for securing the cooperation of interested departments. At other Centers the arrangements have been less precise and an extension coordinator may not be easily identified, or a committee for extension may function in the organization and development of services and programs. Sometimes even departmental or carrera groups initiate extension activities.

If full-time instructors are expected to participate in extension activities, a suitable allocation of their time should be arranged. They might coordinate or sponsor a program, or occasionally deliver a lecture or engage in a panel discussion, without additional compensation. It may be helpful to examine current policies for staff utilization, so that equity and program development may be entirely compatible. Instructors sometimes have neglected their classes to organize an extension program; surely the regular academic program must not suffer for the benefit of extension, worthy as it may be.

Cooperation among the northern Centers in scheduling art extension programs has been facilitated by the provincial tax on movie admission prices, which proposes to foster local and regional programs in the arts. Consequently, the communities have benefited from many performances which have been offered by regional conservatories and other organizations, in collaboration with the Regional Centers. Aside from some indirect funding of the arts, resources for extension come mainly from the moderate fees for seasonal schools and occasional performances, and from the Ministry of Education when it requests special training courses for employed teachers. The Center extension coordinators who were interviewed consistently reported that there was no budgetary allocation for cultural extension work.

In October of 1968 the reform commission of the University Center at Temuco acknowledged the significance of the extension and research functions which, with teaching, now constitute the three functions of the University of Chile. The Temuco commission recognized that extension and research have not been developed adequately, and defended the Centers by noting that the instructional programs extended from 8:30 A.M. to 10:30 P.M., and that the educational programs of the Centers, being new, had inadequate budgets and facilities.

SUMMARY OF RESPONSES FROM PARENTS OF STUDENTS AT UNIVERSITY CENTERS AND SECONDARY SCHOOLS

Parental demands for educational opportunities for their children have risen rapidly during the past decade. By enlarging facilities and staffing for secondary schools, the Ministry of Education is attempting to provide places for all eligible youngsters. Parents, as well as their children, are aware that education is the only key to social mobility for those in the lower socioeconomic class. It is common for entire families to move from a village to a regional city, or from a provincial city to Santiago, to provide a post-secondary education for their children.

To ascertain certain characteristics and opinions of small samples of parents in the Regional Center communities, systematic samplings were obtained from Centers and secondary schools in the same cities. Center students whose parents were interviewed had completed at least one year of study in a Center; secondary school students whose parents were interviewed were in their final year of the secondary school. Objectives of the structured interviews, which included the same questions for each group, were to ascertain whether: (1) parents were aware of the local Center, its services, and programs; (2) they had participated in any way in the affairs of the Center; (3) they wished to know more about the local Center; (4) they desired to engage in Center activities; (5) their children in secondary schools were interested in attending a university. Results are based upon 66 interviews of Center parents (University parents) and 68 interviews of secondary school parents. The first group consisted of 9 or 10 from each of the Center cities, excepting Osorno, and the second group had nearly equal samplings from each of the Center cities. The majority of contacts were made by personal visits to parents' homes, although a few interviews were completed at a parent's place of work. Only one parent could respond for a family, and the majority interviewed (70 percent of the university sample, and 72 percent of the secondary school) were mothers.

Characteristics of Students' Families

In general, the university parents had lived in their communities longer than the secondary school parents (81 percent had lived in their communities longer than 10 years). In each group more than one-half of the respondents reported six or more persons living in the family residence. Of the university parents, 94 percent reported three or more adults lived in the same domicile, and one-third listed five or more adults. More than one-fourth of the university parents reported three or more children under 18 years at home, and a majority of the secondary school parents gave this number. The university parents tended to have more adults and fewer children in the household than the secondary group, and an average of 2.8 children per family in school. At least half the families of University Center students are a source of potential future enrollment in post-secondary institutions (Table 109).

The nature of the sample places the large majority of the university age children in the Regional Centers, and, indeed, an average of 1.4 children per family were attending the Regional Centers. It may be inferred from Table 110 that up to six percent of the university parents had a child in a private university. This same generalization can be made about the attendance of University Center parents' children at a university in Santiago. When State Technical campuses are in the same cities as the University Centers, university parents' other children seem as likely to attend there as at private universities or the University of Chile in Santiago.

Awareness and Participation

A large proportion of university parents and secondary sample parents did not know about the activities of the local Center (56 percent and 68 percent, respectively).

TABLE 109

Schools Attended by Children of University Parents

School	Children Attending	Responses of Families (%)[a]
Elementary	48	45
Secondary	44	50
Vocational secondary:		
Commercial	3	5
Technical	2	3
University, including University Centers	90	100
Total	187	

[a] Sample numbered 66.

TABLE 110

Universities Attended by Children of University Parents

University	Children attending[a]
University of Chile Regional Center in city of interview	74
University of Chile, Santiago	4
State Technical University in city of interview	8
University of the North in city of interview	1
University of the Frontier in city of interview	1
University of Concepción	1
Not known	1
Total	90

[a] Parent sample numbered 66.

TABLE 111

Parents' Awareness of Centers' Community Activities

Activity	University Parents (%)[a]	Secondary school Parents (%)[b]
Musical and theatrical programs	30	26
Students' field work	14	9
Lectures and seminars	11	4
Exhibits	8	3
Courses for professional development	5	3
Radio programs	2	-
Teaching students in secondary school (not ordinary student teaching experience)	2	-
None	56	68

[a] Sample numbered 66. Percentages total more than 100 since some respondents listed more than one activity.

[b] Sample numbered 68.

The heaviest concentration of knowledge of Center activities appeared to be in relation to musical and theatrical presentations. Parents of Center students had slightly more knowledge of the Centers' community activities than do parents of final-year secondary students (Table 111). A larger proportion of parents of University Center students might be expected to support and participate in community affairs of the respective campuses. If the parent respondent had not visited the Center in the past year, he or she was asked whether he would so in order to attend a specific event, and only two parents in each group said "no." It is evident that parents have a lively interest in the Centers and, as members of the community apart from their parental relationships, many of them would be responsive to positive overtures of extension services by the Regional Centers.

Both the constructive and disruptive features of university reform in Chile have received considerable attention in the public media. Certainly, too, in the moderately-sized cities of northern and southern Chile many of the residents have been alert to reform activities in the local University Center. Parents in both groups were asked, "Do you know about the present reform movement in the University of Chile?" More than 70 percent of the respondents in each sample said, "yes." Those who were knowledgeable about university reform listed their principal sources of information as: conversations, newspapers, and radio. Only three respondents from each group reported other sources, including meetings which were devoted to university reform. Parents were interested in knowing about university reform and, additionally, about the Regional Centers themselves (91 percent of the university parents and 98 percent of the secondary school parents expressed interest in having more information about reform and the local Center).

Parents were asked, "Did you attend or participate this past year in any activity of the University Center, on or off its campus?" Thirty-three percent of the university parents and 26 percent of the secondary ones replied "yes" (Table 112). Only at La Serena was nonparticipation registered by all 20 respondents in the two groups. Although more extensive participation might be encouraged through improved communication or other means, it is important to remember that the reported involvement of parents arose because the Centers existed and primarily offered educational programs to students. In these terms, the cultural impact of the Centers upon the parental groups has been considerable.

Educational Plans

Parents of each group were asked, "Do you believe that your children (under 18 years) will be interested in entering a Uni-

TABLE 112

Parents' Participation in Center Activities in the Preceding Year

Activity	University parents (%)[a]	Secondary school parents (%)[b]
Exhibits	20	6
Musical and theatrical productions	14	12
Evening and summer courses	5	4
Lectures	3	3
Graduation ceremonies or occasional events	2	4
Meetings	---	---
None	67	74

[a] Sample numbered 66. Percentage totals exceed 100 percent because some respondents engaged in more than one activity.

[b] Sample numbered 68.

versity?" (Table 113). Parents who had younger children and who believed that they would be interested in attending a university were asked to indicate where their children would probably attend (Table 114). Choices of a university are likely to be affected by economic status of the family, family mobility, family ties in other cities, and the specializations available in different institutions. Considering the uncertainties which the reports indicated, the proportions of future attendance at the local Regional Centers probably will rise somewhat above those in Table 114.

TABLE 113

Parents' View of Educational Aims of Younger Children

To attend university	University parents (%)[a]	Secondary school parents (%)[b]
All younger children	85	74
Some younger children	11	26
No reply	4	---
Totals	100	100

[a] Sample numbered 47.

[b] Sample numbered 68.

TABLE 114

Parents' Opinion of Probable University Location for Younger Children

Location	University parents (%)[a]	Secondary school parents (%)[b]
University Center in community	49	55
University in Santiago or elsewhere from city of residence	34	29
Another university in city of residence, but not the University Center	7	3
Two or more probabilities	2	7
Unknown	4	6
No reply	4	--
Totals	100	100

[a] Sample numbered 47.

[b] Sample numbered 68.

Especially strong preferences were revealed for the local Regional Center among the university parents in Arica, Antofagasta, and Temuco. From the secondary school parents, preferences were stronger in La Serena, Talca, Temuco, and Antofagasta.

Generally, the majority of each group of parents have accurate ideas of the Centers' basic educational programs and nearly three-fourths or more have a favorable opinion of their Center's efforts to direct services toward regional needs and participation of residents in cultural activities (Table 115). Possibly some respondents interpret literally the identification University of Chile at the respective Centers, so that the programs and facilities in the provinces are regarded inadvertently as equivalent to those in Santiago. Even though the Centers now are legally sedes of the University of Chile, community residents need to understand that carreras of each sede in the provinces are quite different from those of the complex and more mature campuses of the University of Chile at Santiago. The image which the Centers project in their respective regions should be realistic. For example, a considerable minority of parents in each sample responded, incorrectly, that the Regional Centers are for those students who do not attain an aptitude test score which qualify them for admission to universities in Santiago, Valparaíso, Concepción, or Valdivia. Although most Center admittees do not achieve high

TABLE 115

Parents' Opinions of Status and Functions of Centers

Opinion of Center	University parents (%)[a]			Secondary school parents (%)[b]		
	Agree	Disagree	Undecided	Agree	Disagree	Undecided
Functions as a university, such as the university in Santiago	39	53	8	47	49	4
Offers professional carreras with duration of 2 or 3 years	82	11	7	77	2	21
Offers professional carreras with duration of 4 or 5 years	72	19	9	70	15	15
Prepares teachers	90	4	6	90	1	9
Stimulates residents to participate in cultural and community activities	82	17	1	75	24	1
Admits students who do not attain test scores necessary for admission to universities in Santiago, Valparaíso, Concepción, or Valdivia	38	59	3	25	63	12
Provides opportunity to obtain university degrees	81	10	9	81	7	12
Directs services toward meeting regional needs	72	27	1	72	25	3

[a] Sample numbered 66.

[b] Sample numbered 68.

enough scores to qualify for admission to like carreras in Santiago, some do, and Centers serve students who have a wide range of aptitudes and abilities, not merely those who are low scorers.

SUMMARY OF RESPONSES OF PROMINENT RESIDENTS

Inquiry of Prominent Residents

The principal purpose of interviewing prominent residents was to ascertain perceptions of the reciprocal relationships of the local Center and the community, and their conceptions of the functions, strengths, and weaknesses of the Centers. With few exceptions the respondents were informed about the Centers and expressed their opinions freely. The total sample of 65 residents, from 3 to 11 in the various Center cities, are classified as follows:

	Number of Interviewees
Major public officials, such as governor of the province, mayor, and municipal councilman	10
Independent professionals and regional officials of governmental organizations for development, planning, housing, finance, and other affairs	12
Directors of regional hospitals or specialized health services	6
Directors of educational organizations such as state normal schools, and general and specialized secondary schools	15
Regional or local officials of organizations such as professional associations, civic groups, art societies, and others	9
Principal officials of local chambers of commerce, industrial associations, cooperative organizations, labor unions, and business enterprises	13

The median period of residence of the respondents in the respective cities was more than seven years; more than a quarter had lived in their current city of residence for 20 or more years. For those having certain official or organizational responsibilities, the average period of service had been approximately three years. Respondents acknowledged various sources of information about the Regional Centers including conversations with directors, administrators, instructors, and students at the Centers, and newspaper and radio announcements. Only two or three in each Center community had participated in Center affairs, read publications or documents of the Centers, or were parents or relatives of students.

Respondents were asked which assistance or collaboration, if any, they or the organizations which they represented had given to the local Center (Table 116). Replies from residents in the different cities followed a general pattern indicating collaboration with the Centers. One representative response can illustrate:

> There has been much collaboration between the community and the Center, through extension and an agreement. The collaboration has been of all types; for

TABLE 116

Prominent Residents' Support of University Centers

Form of Support	Prominent Residents (%)[a]
Financial contributions	26
Donations or loans of facilities, materials, classrooms, or museum	17
Providing teachers and enabling students to have field practice	14
Facilities for field practice of students	14
Advice to or collaboration with the Center	8
Meetings with teachers under Center auspices	5
Support of law in favor of the Center	5
Personal or organizational support	32
No contact with Center; community does not feel related to the Center	9
No reply	15

[a] Sample numbered 65.

> example, the Center has completed a study of interurban transit. The community has received advice from the Center with respect to communal government, which is a new idea. The professors and students in social work help the councils of neighbors, and people in various districts of the city.

Assistance has come from governors of the provinces, the governments and mayors of the municipalities, the Rotary Clubs and Lions Clubs, the regional hospitals of the national health service, organizations of university graduates and professionals, governmental agencies such as CORFO and ODEPLAN, educational institutions, chambers of commerce, and other associations. In general, such activity has concentrated upon the socioeconomic development of the region, the growth of professionals in the community, and the furtherance of community interest in music, theater, and art.

Prominent residents were asked whether they had participated in any Center activity within the preceding year. More than one-third of the respondents had attended concerts, exhibits, forums, and/or lectures; a few had participated in seminars, and a small number had taught part-time at the Center. The participation rate was considerably higher than that of the parents, but it has no implication concerning the intensity or frequency of the participation of members of any of the three groups.

Similarly, prominent residents were requested to agree or disagree with certain statements about functions of the local University Center (Table 117). Thirty percent or more of the residents were undecided, or wished to qualify their statements, while relatively few of the parents were in this category. However, compared to university parents, few of the prominent residents believed that the local Center was a complete university as in Santiago. A slight majority said that the local Center was stimulating the inhabitants of the community to participate in cultural and community affairs; a lower proportion (38 percent) thought the Center services were oriented toward the needs and problems of the region. In these two items the residents registered a far less favorable evaluation of the Centers than the university parents. A much lower proportion of prominent residents (28 percent) than parents agreed that the Centers were for students with inadequate test scores for admission to the universities in other cities. Residents' agreement was heavily concentrated, as was the case for the parents, but residents were less inclined than the parents to be unequivocal about the functions or status of the Centers; they tended to be more analytical and more cautious than most of the parents. Probably as a group the sampling of prominent residents had a higher level of concern for community and regional needs than did the majority of parents.

Clearly, the residents had doubt about the individual Centers' developing into complete campuses of the University of Chile and most of them disagreed with the statement that the local Center was financed adequately for what it was trying to do. Since budget limitations for higher education are well known in Chile, the residents were asked to suggest means by which the local community could give more aid, financial or otherwise, to the Centers. Nearly one-half did not respond definitely to the interview question. A small minority offered positive suggestions: 8 percent said that the community could provide additional funds for support; a few suggested a special campaign for funds; 10 percent supported existing or pending legislation designed to aid financing; about the same proportion thought more aid could come through the cooperation of individuals and groups in the region; and 18 percent felt the local community would resist giving more assistance to the Center. None proposed a general tax on sales, property, or income. Specific

TABLE 117

Prominent Residents' Opinions of Status and Functions of Centers[a]

Opinion of Center	Agree (%)	Disagree (%)	Undecided (%)[b]
Functions as a university	5	69	26
Offers professional carreras of 2 or 3 years in duration	63	3	34
Offers professional carreras of 4 or 5 years in duration	55	14	31
Prepares teachers	62	6	32
Encourages residents to participate in cultural and community activities	51	18	31
Operates for those students who do not attain aptitude test scores necessary for admission to universities in Santiago, Valparaíso, Concepción, or Valdivia	28	34	28
Provides students opportunity to receive a university degree	66	2	32
Orients services toward regional needs	38	24	38
Gives opportunities for higher education that did not previously exist in the region	77	0	23
Appears to be on the way to becoming a complete sede of the Univ. of Chile	35	28	37
Provides a good educational program to its students	26	17	57
Is financed adequately for what it is trying to do	12	53	35

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[a] Sample numbered 65.

[b] The cooperation and attention of the respondents to this written question justified considering a failure to reply as indecision. As a matter of fact, many respondents made this explicit observation voluntarily.

views of respondents represented a range of opinions:

> The economy is malformed. There are 25 provinces and, except for the copper-producing region, the provinces spend more than they collect in taxes.
>
> Many of the people in the community would respond to a call for help from the University Center.
>
> The community should do more. The community does nothing for the University Center. The support could be easy if there were a complete University. The community should have some finances for the University Center.
>
> The Center needs more finances. The community can collaborate in the financing, but it is very difficult. The development of the region is unstable. There is opposition to taxes.
>
> Yes, the community can contribute more to the Center. For example, in technical aspects, in field practice of students during the summer. It is necessary to interest the community in the work of the Center.
>
> The organization has good will toward participating in affairs of the University Center. It would respond to a request from the University.
>
> The community cannot give more funds.

Contributions and Criticisms of the Centers

Many of the prominent residents replied enthusiastically to the question, "How does the local University Center contribute to the city and the region?" (Table 118). Excerpts from comments of residents give additional insight into their opinions.

> The University Center is indispensable.
>
> Graduates do not want to come from Santiago in order to work here.
>
> The help of the University Center to people in various parts of the city is fundamental in the life of the community. In all respects the opinion of the Center is favorable.

TABLE 118

Prominent Residents' Opinions on Centers' Contributions to Community

Contribution of Center	Respondents (%)[a]
Cultural center of zone	42
Educational resources	29
Opportunity for regional students from all socioeconomic levels	29
Regional studies and services	11
Regional development, employment, and income	8
Innovations in creating new carreras	6
Prestige to the community	6
No contributions	22
No response	9

[a] Sample numbered 65.

It elevates the life and culture of the community, and it stimulates cultural activity on the part of students and families.

There has been a considerable increase in cultural activities. The Center has changed the spirit of the community. That now is different.

The people aspire that their children enter the university. They support it with much pleasure.

The University Center accepts its responsibility to the community. Families recognize the help of the Center but they cannot help the Center. Nevertheless, parents want their children to advance more than their parents.

The Center is a great benefit. People of the region can complete their studies here.

The creation of the Center has meant a change toward permanence among the population. The people want to stay here because there are educational opportunities.

Some of the respondents' criticisms pertain to the general setting in which the Centers operate; for example, limitation of financial resources and the interest of various social and political groups in effecting fundamental social change (Table 119).

Most criticisms were stated with evident tolerance and with concern for the difficulties of the respective Center. The criticisms most widely expressed among the Center communities were those relating to regional needs, the curriculum, the unemployment of graduates in some fields, and insufficient financial support. Some statements of prominent residents furnish more detail of the criticisms which were made:

> The policy of decentralization is conducive to offering all programs in each Center. This is not good. Each Center needs more regional orientation, more understanding and research of the region.

TABLE 119

Prominent Residents' Criticisms of Centers

	Respondents (%)[a]
Program does not fulfill needs of region	57
Curriculum lacks suitable carreras; some carreras do not lead to employment	38
University reform resulted in internal disruption; alienation of the community; rupture of relationships among instructors	32
Problems of insufficient funds, deficient facilities and administrative disorganization; lack of instructors, secretarial staff and library resources	26
Community uninformed about Center, and does not have resources which Center needs	22
Duplication and competition among Regional Centers and universities	20
Instructors are of poor quality, irresponsible, participate excessively in administration	12
Excessive number of students, poor quality, and lack or excess of involvement	3
University bureaucratization and lack of contact with university in Santiago	2

[a] Sample numbered 65.

The community is uneasy about the development of the University Center. The people want useful programs, but now the Center has very unrealistic programs.

The university reform has exaggerated the spirit of democracy. There is no confidence in the university or in the future. The protests are desirable, but the reform has not been good.

The Center is a little isolated from the community. It has deteriorated much during the process of university reform. It was a temple of learning, but now there are many strikers in the Center who want to take the power. This condition can be transitory.

The Center is politicized. They are fighting among themselves and they are living within four walls. There is not a feeling of good will between the Center and the community. There are no groups or districts who have received services. The Center does not serve the poor people.

The greatest difficulty is the direction of the Center's actions. It puts emphasis upon social changes and violence in all activities.

In fact, the Center was an objective of the community, and after its establishment the community relaxed.

It is a waste to have three universities in Antofagasta. There is much duplication in administration and in the buildings, facilities, laboratories, and libraries. This situation is absurd. A fusion of the universities is necessary.

The quality of the professors in the Center is low. Many professors have been or still are teachers in the secondary schools. The professors have not developed the spirit of an institution of higher education.

The community is worried. The evening students are responsible for many of the difficulties within the Center. There are many protests.

> After the establishment of the Center there was little contact between the Center and the community. The Center is enclosed with its professors and students.
>
> The Center was created with good will from all the community, but the professionals have not found a welcome within the University Center.
>
> The University Center is very disconnected from the region. There are no relationships. There is conflict between the people and the University Center. The city does not know the Center.

A considerable number of prominent residents offered suggestions and comments about strengthening the Centers and furthering their contributions to community and regional development.

> There are various needs of the Center: more resources and professors, more construction, time in order to develop. The central bodies of the University of Chile must decide. The Center must increase the quality and number of professors.
>
> The community can help the Center more, but the Center must gain the confidence of the community. It should learn about the community and should serve the community.
>
> It is most important to inquire what is the future of the province: tourism, fishing, agriculture, mining, industry? The government and other organizations should agree upon the objectives of the province and the Center should plan and study in accord with the plan of the region.
>
> The University Center should continue with artistic and cultural activities. The Association can collaborate in this type of program. With respect to the programs of study, the Center should avoid duplication of other universities.
>
> The Center should bring people from outside as professors. The professors of the Center can be leaders if they do not succumb to politicization. There is a void of leaders in the community. The Center can do more.
>
> The professors need houses in order to live in the city. The Center should offer contracts for competent

> professors, attracting them with a special plan or
> they are not going to come from Santiago.

To assess the relative importance of benefits which they believed the Centers were giving to the community and region, the residents responded to seven possibilities (Table 120). They assigned primary importance to the Centers' offering preparation for professional careers. Far below this factor in frequency of mention were studies of local conditions and problems, raising the cultural level of the community, and cooperation of students and instructors in the community. Respondents who considered that the local Center did not benefit the community in any of the seven listed ways were instructed not to answer the question. A comparison of the responses to this question with those obtained for other questions indicates that at least the majority of those who did not respond in this instance judged that none of the specified benefits were forthcoming. A considerable portion of the balance could be the result of indecision with respect to given items or even to all items.

TABLE 120

Prominent Residents' Opinions of Benefits of Centers to their Communities

	Respondents (%)[a]
Offers professional preparation to graduates of secondary schools	57
Conducts studies of local resources, conditions, and problems	27
Stimulates cultural life of region	23
Provides cooperation of students and instructors with the community through extension programs	20
Offers developmental programs for professionals in the community	14
Encourages economic development, including new businesses and industries	14
Provides cooperation of students and instructors with the community in social action programs	11
No reply	41

[a] Sample numbered 65.

SUMMARY

The Chilean people enthusiastically supported the University of Chile in setting up Regional Colleges in 1960-1966. The Colleges were a response to educational leadership and a social demand for higher education in the provinces. They also epitomized concern for decentralization of the university throughout the provinces, and for democratization of higher education. The latter signified an extension of opportunity to students from low-income families, thus facilitating upward social mobility for a large and previously neglected segment of Chilean youth. Parents, by their actions during local drives for funds for the Colleges, demonstrated a deep concern for the possibility of a better life for their children. Regional leaders and organizations showed full appreciation of the cultural and economic importance of an institution of higher education in their midst. The continued lack of higher education facilities probably threatened regional retardation and a drain of promising youth to the central metropolitan area. Probably few developments in Chilean cities have been accompanied by such united community spirit, such organization and publicity, such drama, as was the launching of the Regional Colleges in the provinces.

Parents of University Center students and of students in secondary schools usually have acquaintance with the community activities of the University Centers. Approximately half of the parents of each sampling expected that their younger children would enter the University Center in their own community. These findings may be useful in the preparation of enrollment projections for individual campuses. The sample of prominent residents were more restrained and cautious than the parents in agreeing that the Centers were fulfilling certain functions in the region. A considerable proportion were undecided in commenting on various operations of the Centers. Most stressed the importance of the Centers' training for professional careers. A considerable number of respondents spoke well of the Centers' being cultural centers for their zones, providing educational resources to the region, and giving educational opportunity to students. A majority of the residents felt the Centers were not adequately financed to achieve their goals. Some deplored the failure of communities to give suitable recognition to the Centers; others commented critically on the duplication and lack of coordination in local and regional facilities for higher education. More than a third of the group believed that the Centers were on their way to becoming Universities such as that of the University of Chile in Santiago. An equivalent proportion were undecided on this point. A number of residents held that more support could be forthcoming in the form of technical assistance and facilities for field practice of students, especially if the

Centers put forth additional effort. One of the more important findings was that 22 percent of the prominent residents asserted that the Centers in their respective communities had contributed nothing to them.

The University Centers have offered a variety of cultural extension services, professional development programs, community or social action projects, and other forms of collaboration in community and regional affairs. Programs of music, drama, and art have been taken by some Centers to the communities, their plazas, neighborhoods, and communities. Projects and seminars for up-dating or refreshing teachers and other occupational groupings have been planned by the Centers. A number of the Centers have conducted diagnoses and seminars on regional resources and development, sometimes in cooperation with governmental agencies and the department of extension in Santiago. There is little evidence that this interest in regional development has been sustained or systematically organized; rather, it seems to have been occasional and sporadic. In the field of social action, students and instructors at a number of Centers, sometimes in cooperation with those of the university at Santiago, have carried out a number of projects directed toward the improvement of life in communities which are burdened with poverty, malnutrition, unsanitary conditions, and poor health. Within the regular curriculum, the field practice of students has coincided in many carreras with the needs of the organization where the students are engaged. Field work has been a regular feature of the carreras in teaching, social work, nursing, nutrition, agricultural technology, and other fields.

The numerical data do not convey the full measure of the responses of parents and residents. The parents were nearly all responsive, desirous of securing information about the Centers, and interested in the education of their children. Likewise, the prominent residents who were solicited for an appointment appreciated the importance of the Centers in their community, and even when severely critical or antagonistic, apparently hoped for improvement in the future. In general, the prominent residents were supportive although critical, tolerant and respectful of the Centers, eager for them to fulfill their functions effectively, and cognizant of the problems.

CHAPTER 10

FINANCIAL ASPECTS OF THE UNIVERSITY CENTERS

The sedes of the University of Chile in the provinces are at a financial and educational turning point. Their innovations and aspirations, though neither fully realized nor widely appreciated, have been forward steps in Chilean higher education and, given adequate support, they could accomplish much more. If severe underfinancing continues, this spark on the frontier of Latin American higher education may dwindle and disappear.

BUDGETING FOR THE UNIVERSITY CENTERS

Funds for the University of Chile are allocated by the national congress, through the Ministry of Education. Subsequently, the Superior Council of the university and the rector assign budgeted funds to each Regional Center, within which the director controls and administers the budget, assisted by a chief of the budget. Appointments and salaries of instructors are fixed in the rectory. Within the official budget of the University of Chile, Center budgets include operating, transfer, and capital expenditures. Operating expenditures include remunerations, purchases, and services, including per diem allowances, utility services, purchases of equipment and materials, and pending commitments. Transfer expenditures include allowances for student centers in the departments or carreras and for the Federation of Students of Chile. Capital expenditures for buildings and equipment will not be considered here; attention is given only to current expenditures, which include operating and transfer items. It is difficult to obtain an accurate summation of all current expenditure budget items of the Regional Centers. Center expenses covered with central university funds are: annual salary adjustments for rising living costs, certain equipment expenditures, and some general office salaries. These items are estimated to comprise about one-fifth of the total budget for the University Centers.

Economic austerity, specifically the inadequacy of the budgetary allocations in recent years, was listed most frequently among the immediate and pressing problems of the Regional Centers by administrators, chiefs of departments and carreras, and instructors. Lack of building facilities was the second most mentioned problem. Additional problems named were lack of teaching personnel, insufficient teaching materials and audio-visual equipment, and inadequate collections in the Center libraries. Many of those who referred to insufficiency of the budget for their respective Centers criticized the method and basis for determining budgets of various segments of the university.

The directors of the various Centers noted many deficiencies resulting from inadequate funds, one in particular being the difficulty in obtaining full-time teachers. The extension program has suffered as well, resulting in neglect of cultural activities and projects for professional development. Likewise, laboratories, shops, equipment, books, instructional materials, and guidance and student welfare services have been insufficient for the need.

Since available funds have not been sufficient, it is remarkable that the Centers have accepted and served such large increments of students during the past decade. At the same time, they have expanded their programs of career preparation in their attempt to satisfy regional and national needs. A complete examination of financial and economic features of the Centers would require a like review of the entire University of Chile, of which they are integral parts. Similarly, national priorities for expenditures and capital investment, as well as criteria for allocation of funds to education at all levels, would merit study. The research into the development of the Regional Centers did not and could not extend into these broader spheres of economic planning and development; its scope permits me only to summarize major aspects of the Centers' budgetary process and to note recent trends in financing operations. Attention is given to measures of average annual costs per student (as indicated by budget data) and to input-output relationships. Sources of financing are outlined, and comment is offered on certain financial choices for Chilean higher education. The program of construction is described briefly.

The Budgetary Process and Current Expenditures

When the Department of General Studies was functioning, Director Sálas was considerably influential in determining final budgetary allocations of the Centers. After the creation of a general secretary for the University Centers, Center directors expressed their needs to the rector through him. Now the Technical Secretariate of the University Centers (STCU) is beginning to coordinate the budgetary and accounting affairs of the Centers, in collaboration with central offices of the university. Under university reform it appears as if STCU will have considerable responsibility for budgetary and operating procedures of the Centers. Recent national changes are now affecting the universities of Chile as well. Early in 1970 President Frei issued a regulation[1] fixing norms for each university budget, in accord with the organic law of budgets for the public sector. Budgets would include projections of all resources, income, and expenditures for the calendar year (El Mercurio, Feb. 23, 1970). Information will reflect sums in the national budget and those made available by provisions of special laws. It is expected that the responsibility for expenditures will be assigned to an academic or administrative unit, and that it will be feasible to calculate costs of teaching a student in each of the specializations of the respective universities. The new regulation should provide a yearly fiscal program of operations conducive to coordinating and planning higher education with national planning and activities at other educational levels.

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[1] Based upon Article 249 of Law No. 16,464, 1966.

In recent years Chile has spent approximately 3.65 percent of her gross national product on education (Schiefelbein, 1968, p.50). In 1968, 17.9 percent of the national budget was devoted to education (U. de Chile, Oficina de Plan., 1969a, p.23). Of this allocation, the proportion of current expenditures for higher education rose from 28 percent in 1961 to 35 percent in 1965 (Schiefelbein, 1968, p.50). Comparing the public universities (the University of Chile and the State Technical University) to the six private universities, the central government budgeted proportionately larger increases to the latter group during 1965-1968. The real budgetary income (constant escudos of 1968) of the University of Chile, which enrolls more than one-half of the students in the eight Chilean universities, was only 8.4 percent higher in 1968 than in 1965 (U. de Chile Oficina de Plan., 1969a, p.26), while the increase to the private universities was 43.7 percent. It is not pertinent here to speculate upon the reasons for this difference. However, basic information is essential to appreciate the relatively deteriorating economic situation of the University of Chile during the past few years. In 1968 the contribution of the national government to the university was 305,469,000 escudos, 77.0 percent of its total income, compared to 197,722,000 escudos, 77.6 percent of their total income, for the private universities. During 1965-1968 enrollment at the University of Chile, including the eight Regional Centers, rose 49 percent, while the private universities increased 30 percent (U. de Chile, Oficina de Plan., 1969a, p.26). Between 1965 and 1968 the University of Chile experienced a 22.1 percent drop in total support per student enrolled, while the private universities received a 16.1 percent increase (Table 121). Referring only to support from the national government, real income of the University of Chile, per student, dropped 27.3 percent from 1965 to 1968, while that to the private universities rose 10.6 percent. Capital requirements, salary policies, the effects of university reform, shifts in utilization of resources, and national policy toward public and private uni-

TABLE 121

Comparative University Incomes Per Student, 1965-1968
(in thousands of 1968 escudos)[a]

Year	University of Chile All sources	 State	Private Universities All sources	 State
1965	15,173	12,518	11,013	8,973
1966	13,962	11,406	12,464	9,811
1967	12,549	8,846	18,340	9,354
1968	11,816	9,102	12,787	9,924

Source: U. de Chile, Oficina de Planificación, Antecedentes e Informaciones Universitarios, Vol. 1, No. 1, 1969, p.26.

[a] An escudo in late 1968 was worth about 12 U.S. cents.

versities might have influenced the increased financing of the private universities; whatever the reasons, the shift was drastic for the University of Chile. Under these circumstances the Regional Centers faced serious economic problems during the period since they had increased their carreras and their enrollment had grown more rapidly than that of the whole University of Chile. In the Centers probably more than 70 percent of the operating budget is used for instruction, the remainder for administration and services. (See Table 122 to compare this with expenditures of the University of Chile.) Relative shifts of the Regional Centers' operating expenditure budgets (gastos del presupuesto corriente)

TABLE 122

Current Annual Expenditures of the
University of Chile, 1961-1963

Function	Percentage
Teaching	49.7
Research	33.6
Extension	6.5
Administration	10.2
Total	100.0

Source: Ernesto Schiefelbein F., PLANDES Boletín Informativo, Nos. 28-29, Julio-Octubre 1968, p.19.

TABLE 123

Current Expenditure Budgets of the University Centers 1967-1969
(in thousands of 1969 escudos)

University Center	1967		1968		1969	
	Budget	Index	Budget	Index	Budget	Index
Arica	2,534.7	100	3,334.2	132	3,478.2	137
Iquique	1,652.8	100	1,618.7	98	1,525.0	92
Antofagasta[a]	9,230.8	100	9,588.0	104	7,740.0	84
La Serena[b]	3,992.1	100	5,097.9	128	3,717.9	93
Talca	4,215.5	100	3,322.0	79	3,299.8	78
Ñuble[c]	1,879.7	100	3,491.8	185	3,982.3	212
Temuco	4,726.8	100	5,378.4	114	5,004.0	106
Osorno	1,794.8	100	2,413.9	134	3,305.5	123
All University Centers	30,027.2	100	34,245.0	114	33,682.6	112

Source: U. de Chile, Santiago, Oficina de Plan., 1970 reports.
Calculations by author.

[a] Data exclude separate 1969 operating budget for the department of arts at Antofagasta

[b] Data exclude separate 1969 operating budget for the regional conservatory of music.

[c] Extreme increases resulted from Center's beginning in 1967 funded by province-wide tax.

during 1967-1969, are summarized in Table 123. Evidently budgetary allocations regularly are obtained by the subject institutions, and the expenditures usually approximate the budgeted totals. (The shift from 1968 escudos to 1969 escudos reflects differences in processing the data.) For all Centers together, budgetary increases, adjusted for price changes, lagged considerably behind those of enrollment. The total operating budget for the Centers increased substantially in 1965 and 1966, but within these two years five new Centers opened their doors, three of them (Arica, Iquique, and Ñuble) not having been specified in the five-year Master Plan prepared in 1964. Between 1966 and 1967 total enrollment in the Centers increased from 4,921 to 6,914--40 percent.

The similarity of the various Centers, except for size, gives reason to expect a high correlation between enrollment and budgetary allocations. The larger disparities between these two variables appear in the cases of Antofagasta, Temuco, Talca, and La Serena (Table 124), each having had an enrollment in excess of 1,400 and 17 or more carreras. The Centers at Temuco, La Serena, and Talca received a budgetary allowance below the average of 3.31 thousand escudos per student; Antofagasta received 5.09 thousand escudos per student. Three circumstances may account for the relatively high budget at Antofagasta: the staffing and housing of university programs established prior to and apart from the Regional

TABLE 124

Comparison of Current Expenditure Budgets and Enrollments of University Centers, 1969

University Center	% of current expenditure budget	% of enrollment	Current expenditure budget per student (in thousands of escudos)
Arica	11.2	8.6	4.33
Iquique	4.9	2.7	6.10
Antofagasta	25.0	16.3	5.09
La Serena	12.0	15.5	2.57
Talca	10.7	16.3	2.17
Ñuble	12.9	11.3	3.75
Temuco[a]	16.2	23.2	2.31
Osorno	7.1	6.1	4.36
Totals	100.0	100.0	3.31

Source: Table 4 and Table 123.

[a] Temuco succeeded in securing a supplementary allocation from the national government.

College and later merged with it; the allocation of certain regional tax revenues for the support of extension programs; and the 30 percent addition to salaries for working in that zone. The remaining Centers also had current expenditure budgets per student above the average for the eight Centers. Having six to 14 carreras apiece and enrollments ranging from 250 to more than 1,000 students, evidently, they were judged to be more needy on a per-student basis than the larger Centers. The case of Iquique, with the lowest enrollment and the highest cost per student, may present a serious problem in future planning. The budgetary decisions in this instance give some credence to the idea that in this type of institution costs per student-year decline, at least up to some unknown point, as enrollment and programs increase. Much would depend, of course, upon the costs of individual carreras and their rate of increase in relation to that of enrollment.

A limited analysis may be made of the share of the operating budget allocated to the Centers. The Regional Centers received 6.9 percent of the total University of Chile budget in 1968 (U. de Chile, Oficina de Plan., 1969a, p.104), and no capital expenditures were budgeted for the Centers that year. Considering only the current expenditures budget, the eight Regional Centers were allocated 7.8 percent of the University of Chile operating budget. Since total Center enrollment in 1968 constituted 26.7 percent of the total for the University of Chile, obviously the proportionate funding for the Centers was not commensurate with their proportionate enrollment. On the other hand, allowances should be made for expenditures in Santiago for research, administration, and relatively costly instruction in programs of medicine and other technical fields. The situation does indicate the pressing need for examination and appraisal of the budgetary policy in a manner consistent with the current moves toward cost analysis and financial accountability.

BASIS AND SOURCES OF FINANCIAL SUPPORT

Criteria for Allocating Resources to Higher Education[2]

The Chilean situation is not distinctively different from that prevailing in other Latin American countries; the bases for allocating resources to higher education appear to be student pressure, centers of power, manpower requirements, development of institutions of excellence, efficiency, and operating norms. Student pressure, or the social demand for university admission, has increased markedly in Chile during recent years due to the extension of elementary and secondary education to more and more children. Secondary school graduates in most well-to-do families are expected to attend the university and now students from lower-income families seek admission to qualify for professional employment and social mobility. Governments and institutions normally respond to large-scale increases in the number of qualified applicants for admission by increasing the number of admittees, a situation naturally leading to demands for larger budgets and more expenditures for higher education.

It has been asserted often in Chile that every qualified applicant should have the opportunity to attend the university. The administration of President Allende probably will maintain this position. Some of the growing student demand upon the Regional Centers has arisen because a higher proportion of students than formerly have come from residences outside the region of the respective Centers. If students tend to gravitate toward carreras in teaching, as the enrollments indicate, this reputedly low-cost program might place less of a burden upon Chilean resources, but it should not be assumed that any program is relatively inexpensive on a per-student basis unless careful attention is given to the quality of that program in relation to the needs of Chile.

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[2] Most of the criteria which are identified in this section have been drawn from Benson and Rojas, 1970. See also Benson, 1968, pp.335-341.

Second, allocation of resources to higher education is influenced by decisions among various powers such as government, church, professional groups, and decisionmaking bodies within the universities themselves. These influences do not always reflect carefully developed criteria for the development of educational services. Nor does it appear as if costs of duplicating carreras in various centers or extending the duration of carreras such as medical technology have been subjected to an assessment of relative costs and benefits compared to equivalent expenditures for other educational purposes. Additional years of training or specialization may in fact yield diminishing returns in relation to that already provided; programs of on-the-job training or continuing education may be a more efficient means of securing additional training. Further, a large measure of resource allocation to higher education is contingent upon national policies of taxation, which are not determined by educational priorities, except for a number of special laws adapted to meet some regional needs.

Third, resource allocations to higher education are affected by a nation's manpower requirements and rate of economic growth. Carnoy (1967) suggests that there is a positive correlation between rates of economic growth and rates of return to students who have had primary and university schooling. During periods of rapid growth these two levels merit receiving the largest increases of investment, but rapid investment in education does not assure economic growth. Carnoy concludes that there may be a variety of optimal choices for resource allocation to education. His findings are based upon his study of Mexico and an examination of the relationship between the average rate of return for schooling and general economic conditions in Chile, Colombia, Mexico, and Venezuela. In the United States, a number of studies indicate that at least 20 percent of the national economic growth is attributable to expenditures on educational services (Schultz, 1963; Denison, 1962). This situation has given a rationale for continuing expansion of national investment in education. Social demand rather than manpower requirements of the economy has been the major determinant for growth of higher education resources in most specializations. While Chileans have much interest in cultural development, stress in higher education has been upon professional preparation, which has been influenced quantitatively by manpower needs in various professions. In many cases the available places in different universities have been adapted to the estimated future shortage or surplus of specialized manpower. The tendency to extend the duration of carreras may intensify the problem of satisfying urgent needs for specialized manpower, and continuation of unemployment of graduates in some specializations would warrant modification or curtailment of carreras. The introduction of specialized training in Chile's new secondary schools and the further development of occupational education by the National Institute of Professional Training—Instituto Nacional de Capacitación Profesional (INACAP)—should lead to new and varied employment opportunities for young adults. If so, this will alleviate pressure upon the university, including the regional sedes. In case the salaries for Center graduates do not exceed substantially those of secondary school graduates, the potential demand for admission to the Regional Centers could be affected adversely.

Selowsky (1967, pp.55-57) found that the contributions of education to economic growth during 1955-1964 were concentrated among those who had completed either the six years of elementary school, the six years of secondary school, or five years of university study. On the other hand, Bruton (c.1967, p.37) concluded that rates of returns to individuals on their educational investment did not depend upon their graduation from secondary school or from the university. Failure to complete a program of study did not result in any loss in earnings; individuals who completed part or all of a five-year university program tended to achieve nearly a 14 percent return on their investment in higher education. (Investment includes the estimated foregone earnings of students during their years of study and also direct outlays on education.) This situation ". . .suggests that the Chilean economy is not generating a demand for graduates with specific knowledge, but rather for individuals with the capacity to learn and adapt."

Applied to students and graduates of Centers in the provinces the validity of these findings could influence the allocation of financial support for the carreras of those campuses, as well as curriculum development, the duration of carreras, and the attrition rate. Consideration would still need to be given to nonacademic outcomes of education and the practical importance of a university degree for admission to some professions.

It is essential to examine the capacity of the Chilean economy to utilize graduates in specialized fields. Bruton (p.33) observes that the flow of university graduates into the economy in recent years has exceeded the economy's ability to absorb them,[3] suggesting the need for continual review of the allocation of funds for university education. A review of personnel in intermediate-level carreras, should consider the training in relation to specifications for employment, adaptability of training to several occupations, practices of employers which affect utilization of graduates in new occupations, potentialities of the national employment service, and factors such as geographical and social mobility.

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[3] A number of developing countries have had a similar experience. See, for example, Harbison and Myers, 1964, pp.104-109.

Fourth, in developing institutions advancement in research and in the sciences may be given the highest priority, as is done in many countries. Accordingly, only a few campuses in Chile might qualify for substantial allocations, but if teaching and community service command a high level of priority, the Regional Centers could expect special consideration. The Centers do merit consideration for their attention to the basic sciences in programs for all students, and the possibilities for educational research are auspicious in the provinces. But, like many other countries, Chile faces the dilemma in resource allocation of seeking continual progress in the quality of higher education on the one hand and responding to an accelerated demand for admission. Both courses logically may be pursued, but each inevitably will affect the attainment of the other. Conceivably the pragmatic choice, though not ideal, would be mediocrity rather than excellence. Political factors, instead of the requirements for socioeconomic development, could predominate in making such a decision.

A fifth basis for allocation of funds is the efficiency of the campus or institution: funds flowing in suitable proportions to institutions having sufficient enrollment and adequate dispersion of it among various programs, thus enabling them to operate at reasonable levels of cost and to carry out their functions effectively. Incentives for performance and also effective utilization of resources in higher education need not impair the autonomy essential to a university or higher education system.

Finally, a sixth criterion is the body of norms established tacitly or explicitly as guides in higher education planning. The norms may reflect consideration of population distribution, cultural requirements of regions, minimal and optimal size of individual campuses, basic educational programs, and determinants for the introduction of specializations. Financial feasibility, including the probable tax contributions of the respective regions, should be reviewed in a realistic application of norms to the Chilean setting.

In lieu of a study of decisionmaking and budget determination within the University of Chile, it would not be feasible to ascertain definitely which criteria guide the allocation of funds to the University Centers, though certain observations may be offered. Student demand and norms for serving students, as reflected by enrollment, evidently are considered. Major discrepancies between enrollments and budgets appeared in several instances in 1969. The Centers at Temuco and Talca did not fare well, while those at Antofagasta, Ñuble, and Arica did much better. Their economic situation was improved substantially by revenue from special regional taxes and, in the case of the Arica Center, by aid from the Arica Council for Progress. The criterion of power centers, with reference to regional action, seems to have been operative in these cases. It is quite possible that the carreras of the respective Centers were among the determinants of their operating budgets. If so, the criterion of manpower requirements has been applied. Within the university as a whole the needs of costly and prestigious programs, such as that in medicine, inevitably affect the distribution of funds to the Centers and the criteria of academic excellence and efficiency certainly received consideration.

Some Cost-related Ideas

A consideration of criteria for allocating funds leads naturally to an inquiry about the productivity of the Regional Centers. Reference here is made to the cost-related factors of the expansion of carreras and specializations, student retention rates, the ratio of instructors to students, and input-output relationships. It may be economical to arrange for a concentration of more carreras in one or two Centers and to provide necessary residence facilities for students. A useful guide in these matters would be to extend to the Regional Centers analyses of operating costs per student and costs per graduate in the various carreras. The attrition rate directly affects the cost per student in the subsequent years of a carrera; as classes decrease in size, the cost per student increases. The degree of this tendency would be affected by the type of carrera, the supervision and equipment required, and the steps which are taken to increase instructors' salaries, improve library resources, extend counseling services, and strengthen other aspects of the educational program. If the withdrawal of students can be reduced by counseling or more financial assistance, the extra cost of serving additional students in the second, third, fourth, and fifth years would be minimal.

Staffing policies are a major educational cost since remuneration constitutes the preponderant part of the Centers' budgets (77 percent of the 1969 operating budget). Using the statistical equivalent of a full-time instructor (derived in Chapter 6) Table 125 presents the relationship between full-time-equivalent instruc-

TABLE 125

Ratio of Full-time-equivalent Instructors to Enrollment in University Centers, 1969

Center	F.t.e. Instructors		Enrollment		No. of students per F.t.e. instructor
	(N)	(%)	(N)	(%)	
Arica	75.4	10.9	804	8.6	10.7
Iquique	29.1	4.2	250	2.7	8.6
Antofagasta	148.7	21.4	1,521	16.3	10.2
La Serena	81.7	11.8	1,447	15.5	17.7
Talca	111.9	16.1	1,519	16.3	13.6
Ñuble	77.4	11.2	1,061	11.3	13.7
Temuco	130.1	18.8	2,168	23.2	16.7
Osorno	39.2	5.6	575	6.1	14.7
All Centers	693.5	100.0	9,345	100.0	13.5

Source: Table 47. U. de Chile, STCU, Boletín Informativo, Año 4, No. 6, Mayo de 1970, p.27.
Calculations by author.

tors and student enrollment in 1969. Since all students are full time, enrollment data may be used for ascertaining this relationship. For all Regional Centers, the ratio is one full-time-equivalent instructor to 13.5 students, but considerable differences appear among the Centers. The three lowest ratios, probably the more costly operations in terms of teaching services, occur at Iquique, Antofagasta, and Arica. The first of these Centers has such a small enrollment that the ratio of one instructor for 8.6 students logically results from small-sized classes in a modest variety of carreras. At the Antofagasta branch the teacher-student ratio of one to 10.2, which represents a comparatively favorable staffing relationship, probably reflects the original staffing practices at the Pedagogical Institute of Antofagasta and the School of Social Work, both of which now have been consolidated with the regional campus. The less favorable staffing arrangements appear at the older Centers of Temuco and La Serena, having ratios of one to 16.7 and one to 17.7, respectively. Compared to similar institutions in other countries, these ratios are not unsatisfactory, but teacher-student ratios alone should not be the only basis for staffing. Types of carreras, methods of teaching, supervision of field practice, and other responsibilities also should be considered in projecting needs for professional staff.

Caution must be exercised in applying the data of teacher-student ratio to educational costs. The Centers have emphasized continually the recruitment of full-time instructors with higher salaries than the equivalent in part-time teachers. In view of other services of full-time instructors, however, it would be a serious error in educational practice to maximize the part-time teaching staff even if it is less costly. Part-time instructors by definition cannot do much of the work of an institution which necessarily falls upon the shoulders of full-time professionals. If the salaries of full-time instructors are not really adequate, or comparable with those in other professions which require like training, the quality and dedication of instructors are likely to be minimal. And desirable as it is to strive for an optimal balance of full- and part-time instructors,[4] this effort could be complemented by the professionalization of university teaching programs for the improvement of instruction, part-time employment of practicing professionals in some carreras and combating isolation of the Center from the community.

The educational productivity of an institution may be measured roughly by its output of graduates in relation to its admittees. A lag of several years between these two variables should provide a more nearly valid comparison. When the duration of different carreras is so variable, as in the Regional Centers, this technique can be used only by noting the admission and graduation of students in individual carreras. The recency of introducing many programs, especially the longer ones, in the Centers augments the difficulty of using this type of plan. To secure one measure of the efficiency of the Regional Centers in producing graduates we may begin with the data in Table 126. The total of 2,120 (col. 7) reflects students enrolled in the different years of study, beyond the first year, within their respective carreras. In economic terms these students represented human capital in a developmental stage. Varying amounts of educational investment had been expended for their education in the University Centers. For 1966 this beginning inventory was computed in the following way: the number of students in each year of study at each Center was determined. First year students were not counted because no investment in higher education had been made in them in 1966. Second year students were included, multiplied by a factor of 1, to indicate that 1 year of investment had been made in them, and third year students were added in, multiplied by a factor of 2. The total of 8,701 in the eighth column is computed the same way, representing the accumulation of student-years invested at the end of the period 1966-1969. Additional weighting factors of 3 and 4 were used for the enrollments of the

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[4] For a brief discussion of full-time and part-time teaching, see Economic Commission for Latin America, 1968, pp.150-151.

TABLE 126

Enrollment and Inventory of Student-years of Completed Study in the University Centers
1966 and 1969

	Enrollment						Inventory of Student-years				
	1966		1969		1966-1969						
Center	(1) N	(2) % of Total Enrollment	(3) N	(4) % of Total Enrollment	(5) Increase	(6) % Increase (col. 5 ÷ col. 1)	(7)[a] Beginning Inventory 1966	(8)[a] Ending Inventory 1969	(9) Increase of Inventory (1966-1969) (col.8-col.7)	(10) % Increase of Inventory (col.9÷col.7)	(11) % Share of Total Increase Inventory
Arica	340	6.9	804	8.6	464	136.5	70	682	612	874.3	9.3
Iquique	171	3.5	250	2.7	79	46.2	68	160	92	135.3	1.4
Antofagasta	443[b]	9.0	1,521	16.3	1,078	243.3	243	1,434	1,191	490.1	18.1
La Serena	742	15.1	1,447	15.5	705	95.0	398	1,583	1,185	297.7	18.0
Talca	872	17.7	1,519	16.3	647	74.2	290	1,417	1,127	388.6	17.1
Ñuble	439	8.9	1,061	11.3	622	141.7	—	898	898	—	13.6
Temuco	1,503	30.5	2,168	23.2	665	44.2	878	2,159	1,281	145.9	19.5
Osorno	411	8.4	575	6.1	164	39.9	173	368	195	127.2	3.0
All Centers	4,921	100.0	9,345	100.0	4,424	89.6	2,120	8,701	6,581	310.4	100.0

Sources: U. de Chile, Departamento Coordinador de Centros Universitarios, Boletín Informativo, Año 1, No.1, Sep. de 1966, p.21; U. de Chile, Instituto de Investigaciones Estadísticas, Informativo Estadístico No. 20, Dec. de 1969, pp.13-14.

[a] $I = \Sigma NY$, where I = inventory, N = number of students in i^{th} year, and Y = number of years of study completed by given student in i^{th} year (1 year for second-year student, 2 years for third-year student, etc.).

[b] Data do not include enrollments of the Pedagogical Institute and the Social Work program in Antofagasta. This course has been followed here in order to be consistent with Table 127.

fourth and fifth years, respectively. These inventory data, especially in column 10 giving the percentage increase of the inventory from 1966 to 1969, are useful to indicate the short-term output trend of graduates of the various Centers. During the next few years relatively higher increases will occur at Arica, Antofagasta, Talca, and La Serena, and lower ones will occur at Temuco, Osorno, and Iquique. Substantial shifts in retention rates could affect these relative comparisons. Using the type of inventories shown in Table 126 the educational output of an institution during a period of time can be measured by calculating the ending inventory of student-years of completed study and then adding the number of graduates produced during the period, with each graduate being multiplied by the number of years of study which his carrera requires. To apply this procedure to the period 1966-1969, the flow of output would be: (Number of graduates x number of years required to produce each) + (ending inventory of completed student-years of study in 1969).

Educational input, on the other hand, is measured by taking the sum of all the enrollments of students in each year of the 1966-1969 period, plus the beginning inventory of completed student-years of study in 1966, with one modification. Since no students in the first year of study in 1969 could appear in any measure of output, they are excluded from the count of enrollment in 1969. All other students theoretically could be counted in the measure of output either as graduates or in the ending inventory of completed student-years of study. Input, expressed simply, is completed student-years of study in 1966 + (sum of annual enrollments during period 1966-1969, minus first-year enrollment of 1969).

The individual Regional Centers measured in accord with the above description are shown in Table 127. If a Center had no dropouts, its output would tend to equal its input; student withdrawals cause input to exceed the output and result in an excess of student years; that is, years that are not productive from the point of view of producing graduates. These excess years for the eight Regional Centers, during a four-year period, reached a total of 14,028, 50.9 percent of the total input. An alternative method of considering the relationship of input and output would be to calculate output as a percentage of input. This would result in the lower input-output ratios being expressed as the higher percentages of student retention and graduation. Thus the figures for La Serena and Temuco, respectively, would be 55.1 percent and 52.4 percent.

Theoretically the input-output ratio can be one, but considerable variation appears in the ratios of the individual Centers. The older Centers of La Serena and Temuco have the lowest ratios, 1.82 and 1.91, indicating a high level of productivity compared to the average of 2.09 for all Centers combined. If in the future the retention rate of students should rise, the input-output ratios would move downward. As the programs of the Regional Centers become more stabilized, it might be expected that the output of student years would more nearly approach the input within a given period. In other words, the proportionate loss of student years, which are not reflected in output, would decline.

This method of measuring efficiency does not in any way measure the comparative quality of training of Center graduates and it is based upon the assumption that the years of enrollment of students who leave the Centers prior to graduation have no value. In terms of personal and intellectual development, or in relation to prospective employment and future income levels, this is questionable. Ideally, a study of students' academic programs should deal with the academic progress of individual students. Subject to these qualifications, the method can be a useful measure of educational productivity.

A final relationship now may be observed by bringing together for comparison the individual Center's shares of the measured educational output and of current expenditure budgets for the period of 1966-1969 (Table 128). Disparities of relationship are

TABLE 127

Educational Outputs and Inputs of the University Centers, Based on Criterion of Student-years of Completed Study, 1966-1969

Center	Graduates 1966-1969 (in student years)	Ending Inventory 1969	Total Output (Cols. 1+2)	Share of Total Output	Total Input	Share of Total Input	Input-Output Ratio (Col. 5÷3)	Excess Student Years (Col. 5-3)
Arica	229	682	911	6.7	1,981	7.2	2.17	1,070
Iquique	142	160	302	2.2	867	3.1	2.87	565
Antofagasta	372	1,434	1,806	13.4	3,783	13.7	2.09	1,977
La Serena	763	1,583	2,346	17.3	4,260	15.5	1.82	1,914
Talca	750	1,417	2.167	16.0	4,658	16.9	2.15	2,491
Ñuble	216	898	1,114	8.2	2,505	9.1	2.25	1,391
Temuco	1,875	2,159	4,034	29.8	7,701	27.9	1.91	3,667
Osorno	494	368	862	6.4	1,815	6.6	2.11	953
All Centers	4,841	8,701	13,542	100.0	27,570	100.0	2.09	14,028

Sources: Table 126.
Secretaria Tecnica de Centros Universitarios, Universidad de Chile.
U. de Chile, Instituto de Investigaciones Estadísticas, Informativo Estadístico No. 20, 1969, pp.13-14; U. de Chile, DCCU, Un Aporte al Desarrollo de la Educación Superior, 1968.
Calculations by author.

TABLE 128

Educational Output and Current Expenditures Budget of University Centers 1966-1969

University Center	Share of Total Output	Share of Budget
Arica	6.7	9.5
Iquique	2.2	4.5
Antofagasta	13.4	29.1
La Serena	17.3	13.9
Talca	16.0	11.0
Ñuble	8.2	8.7
Temuco	29.8	16.5
Osorno	6.4	6.8
Totals	100.0	100.0

Sources: Tables 123 and 127.
Calculations by author.

evident; the Temuco Center had the lowest proportion of the current expenditures budget in relation to educational output, but the budget figure does not include the supplementary allocation which Temuco obtained from the national government in 1969. A comparison of these results with Table 124 reveals a high level of consistency in the situations of the respective Centers. The speculative explanations for variations there are also applicable in Table 128, which introduces the new factor of educational output.

Sources of Financial Support

The funds from the national government are directed to the university through the budget of the Ministry of Education (Table 129). The absence of matriculation fees suggests that higher education is considered in Chile to be virtually gratuitous. Higher education in Chile has derived only a small portion of its financing from student payments. Even in the private universities, which also receive much financing from the national government, the matriculation fees in 1964 made up only 2 percent of the incoming annual funds. The practice of charging low fees to students, and of exempting many from any fees, has been economically advantageous for all students, including the large majority who come from the higher income groups. Table 130 indicates that in 1969 it was expected that only 1.5 percent of the total budgeted expenditures for Center operations would be derived from student matriculation and laboratory fees.

National law No. 16,419, levying special taxes in the Ñuble province for the support of the Regional Center, provides funds only for support of the campus at Chillán. The taxes include a 2.5 percent levy on profits of commercial and industrial enter-

TABLE 129

Sources of Income to the State Universities of Chile, 1964

Sources	Percentage
Budget of Ministry of Education	80
Revenue from special laws	1
Income from university's funds	5
Matriculation fees	—
Sale of services and other aids	14
Total	100

Source: Ernesto Schiefelbein, *PLANDES Boletin Informativo*, Nos. 28-29, Julio-Octubre 1968, p.52.

TABLE 130

Sources of Projected Income for Current Expenditures Budgets of University Centers, 1969[a] (in thousands of escudos)

Source	Projected Income		Percentage of Total Budget
Students:			
Matriculation fees	221.4		
Laboratory fees	250.9		
Residences	103.0		
Other	128.7		
		704.0	2.3
Special laws:			
Law #16,039, Antofagasta	350.0		
Law #16,419, Ñuble	3,078.3		
Council for Progress of Arica	1,775.0		
Other	220.0		
		5,432.3	17.5
Services and donations:			
Services for Ministry of Education	297.8		
Other services	80.8		
Contributions from municipalities	23.6		
Other contributions	96.6		
		493.8	1.6
Total projected income from sources other than the Ministry of Education budget		6,630.1[b]	21.4
Estimated budget from the Ministry of Education		24,326.6	78.6
Totals		30,956.7	100.0

Source: U. de Chile, *Presupuesto Unico de Entradas y Gastos Corrientes y de Capital, 1969*, pp.17-22.

[a] Carry-over items from the preceding annual budget, a total of 1,108,001 escudos for the eight Centers, are not included in the data of this Table.

[b] Does not include the projected income of 1,945,835 escudos for the regional conservatory of music at La Serena, including mainly E952,386 under Law No. 16,840. The conservatory is affiliated with the University Center at La Serena, but admission policies and the program of studies are adapted for students of various educational levels. Nor does this item include the projected income of 1,188,302 escudos for the art department at Antofagasta, a sum derived largely from collections under Laws No. 15,676 and 16,583.

prises, a one percent charge on earnings of individuals, with certain exceptions for those in lower income brackets, a one percent tax on transactions at the livestock markets, and other special levies. As business and incomes have risen, the collections under the law also have increased; in 1968 the tax contributions reached 2,310,783 escudos and during the first nine months of 1969 they were more than 3,600,000 escudos. This sum constituted approximately nine-tenths of the Center's budgeted expenditures for the year.

The Ñuble levy exemplifies an exceptional sense of regional responsibility for higher education in the province. Conflict and political struggles within the Regional Center, and its weakening relationships with the community, do present a threat to the continued maintenance of the tax schedule at its present level. The Center for Ñuble so far has been financed well above the average budget per student (Table 124), but it would be premature to say that the Center is financially secure. It is dependent upon the continued good will of people in the province, who could become resistant to the financial burden of the Center. Furthermore, the lack of a permanent site for campus development tends to limit the Center's immediate potentialities. It is unlikely, however, that the youth and adults of the province would risk the disintegration of a Center which they worked so hard to obtain.

The Regional Center at Arica has received major support from the Council for the Progress of Arica (Junta del Adelanto de Arica--JAA). Under Law 13,039, the Junta was created as a juridical person of public law in 1958 for the purpose of facilitating socioeconomic development and progress in Arica. Aid to the local Center of the University of Chile, as well as to the campus of the University of the North, is one of the JAA's many public commitments. The two universities receive 1.5 percent of the budgeted expenditures of the JAA. In addition, each of the campuses has been allocated 25 percent of the profit derived from the Casino of Arica, which the Council constructed with its revenues. The activities and donations of the JAA are governed by law, and its budget must be submitted to the national government. The Council's sources of income come mainly from taxes on income, international trade, and business transactions within the region, and from the activities of the Casino. In fact, the organization is nearly independent under present law. The development of the two university campuses, as well as such activities as housing and port and street development, indicates the vigor and planning which underly this unusual agency.

Other special laws which provide assistance to some of the Regional Centers include a 1966 law which taxed the copper industry, requiring that 200,000 escudos be paid annually to the University of Chile for use by the Center in Iquique and a like contribution for the Center at Antofagasta. Another law specifies a 10 percent admission tax on movie theaters in the northern region which supports the department of art in the development of music and theater in the Antofagasta zone. The Talca Center derives financial benefit from a tax on the match industry in that area; in 1969, 360,000 escudos from the match tax were allocated to Talca (La Mañana, Talca, Sept. 4, 1969).

Income from other sources may accrue for services rendered or as donations. For example, the income from the Ministry of Education has arisen from agreements with several Centers to carry on special aspects of teacher education, such as programs for upgrading teachers in service. A number of municipalities, along with CORFO, have indicated their willingness to assist the Centers. While these sources are not regularized, they offer occasional relief.

Initial financing for the inauguration and operations of the Regional Colleges was obtained through national legislation which augmented the budget appropriation for the University of Chile to provide salaries and operating funds. The university also searched in other quarters for additional funding of the new Colleges. In April and May 1961 a Ford Foundation mission visited Chile to assess opportunities to assist in the development of Chilean higher education. The mission acknowledged the Regional Colleges as the most promising new institutions in Chile, and it was impressed by the potential capacity of the Colleges to extend opportunities for higher education to a substantially broader sector of the population. The visiting mission noted the modern academic practices of the Colleges, which departed radically from the traditional pattern of higher education and were potentially significant for academic reform in Chile (Manitzas, 1964, pp.4-6). Following consideration of the mission's report, and statements from the University of Chile, the Ford Foundation approved a grant of $660,000 on September 25, 1961. The major portion was allocated for staff development in two forms: fellowships for training prospective Chilean instructors abroad, and a program of staff training in Chile. The grant was to provide advisory services to the Colleges in areas such as curriculum planning, short-term carreras, and educational administration, as well. Lesser amounts of funds were allocated for library materials and laboratory equipment. The grant included provision for the professional and administrative services of the University of California Center for the Study of Higher Education at Berkeley, led by T. R. McConnell, its first director, and by Leland Medsker, vice director and since 1968 director of CRDHE.

At the request of the University of Chile, CRDHE dispatched consultants in measurement and evaluation, curriculum design, administrative management, architectural planning, and library development. A one-month United States tour was arranged for Dr. Salas, directors and sub-directors of the existing Regional Colleges, and two members of the Department of General Studies directly involved in administration of the Colleges in 1963. In addition to providing continuing service and counsel, CRDHE coordinated the fellowship program in the

U.S.A. A contractual arrangement with the International Institute of Education (IIE) provided for many of the financial and administrative procedures of the fellowship program.

In 1964, a Ford Foundation analyst commented on the development of the Regional Colleges.

> Perhaps the best measure of solid accomplishment in this period is the fact that the colleges are now firmly established with strong institutional roots not only within the framework of the University of Chile but also within their local communities. Their potential capacity to expand substantially opportunities for higher education is already being demonstrated. In addition, they are emerging as pace-setting institutions not only in terms of modern academic programs but also in the development of new kinds of training and career specializations. Despite the range of problems which still remain to be overcome, the colleges have nevertheless advanced to a point where they can already serve as models for a new and significant venture in Chilean, and perhaps Latin American, education (Manitzas, 1964, p.19).

When the original grant expired, the Ford Foundation allocated an additional $770,000 through 1967, and various extensions have enabled its use by the University of Chile until 1971. The pattern of the supplementary grant was the same as that of the first one. More than one-half of the funds were to be expended upon fellowships abroad. Considerable sums were allocated for a master teaching program in Chile, for library and laboratory materials, and for consultants and research. During 1970 and 1971 the Technical Secretariate of the University Centers and the regional sedes were arranging studies and seminars for reviewing and revising various carreras, improving the quality of teaching, studying the problems of academic structure and coordination, and assessing regional needs through a planned study of manpower needs.

Possibilities for Additional Financing of the University Centers

There is little reason to hope that the sedes will obtain additional financing from the resident taxpayers of their respective regions; the major responsibility for financing them will fall upon the national government, and ultimately upon the University of Chile in its dissemination of available funds. Any major improvement in financing of the Regional Centers, and for higher education in general, probably will depend upon Chile's rate of economic growth and the priorities and taxation policies of the central government.

Recent attempts have been made to increase the revenue from special taxes favorable to several Centers. A proposed revision of the match tax is an attempt to increase the reliability and productivity of the existing law. One form of this proposal would provide that the provinces which the Talca sede serves would contribute 10 percent of the annual revenues of the revised tax to support the Talca campus. Similarly, in northern Chile the Regional Centers are collaborating with the State Technical University in advancing, through legislative representatives, a project to impose special export taxes on iodine and other minerals which would aid institutions of higher education in the region. These attempts to impose special levies, or redistribute revenues of existing excise tax laws, may be helpful stopgaps during a financial crisis, but they are not reliable methods to finance an individual Center. Variations in the natural resources of regions do not serve as an equitable base for aiding local campuses in less favored zones; nevertheless, efforts toward sustained improvement of financing may be hastened by the quest for special legislation.

Other possibilities would be to charge a much higher matriculation fee to more students, and at the same time augment the loans for students who need them (Schiefelbein, 1968, p.52). Those who could not afford to pay a matriculation fee would be exempted from doing so (see Chapter 7). Another approach proposed by Juan Gómez Millas in 1967, then Minister of Education, was to require university graduates to pay a special tax. Two years after leaving the university a graduate would pay an additional 2 percent of his income tax (global complementario) for five years, then, for the next 15 years, the additional tax would be 3 percent of the income tax. The theory of the special tax is that those who have benefited from a university education at a very low cost for preparation in a profession, would assume responsibility for repaying society some of the cost. Resistance to the proposal may be expected from students who graduate but do not follow the profession for which they have prepared (editorial, El Mercurio, Mar. 16, 1970). Controversy may also arise over the duration of payment, the percentage of the additional tax, and the attachment of the new levy to the income tax, which applies to income from factors other than earnings resulting from professional service. In lieu of a more generalized development of the tax system, it appears as if this approach to funding of higher education will become increasingly important as a possible course of action, but certainly not a panacea.

Construction for the University Centers

In November 1962, the Inter-American Development Bank (BID) approved a loan of $2,300,000 U.S. to assist in development of buildings and equipment for five originally planned Regional Colleges--Temuco, La Serena, Antofagasta, Talca, and Osorno (Banco Interamericano de Desarrollo, 1969, p.16). The loan was designed to support the expansion of the Regional Colleges and help to provide the benefits of higher education to Chile's lower income group in the provinces (Inter-American Development Bank, news release, Nov. 16, 1962). Although BID generally did not favor granting loans for construction projects in education, it recognized the unusual meritorious features of the Regional Colleges program:

> Through the combined efforts of the University of Chile, the Ford Foundation and the University of California, it has been possible to establish the basic structure of these colleges and to launch their activities in the face of substantial physical handicaps. But the future prospects for the project are dependent upon the availability of adequate efficient and low-cost buildings to house its activities. The buildings will not therefore be a point of departure, but the culmination of a soundly based innovation in advanced education in Latin America, already initiated with great effort (Inter-American Development Bank, 1962a).

Funds were used to construct classrooms, laboratories, libraries, offices, and other educational facilities, as well as acquire equipment, books, and furnishings. Considerable emphasis was given to controlling construction costs so that funds would be available for equipping the buildings properly. The plan provided for amortization of the loan within a period of 15 years. Interest payment on the loan was fixed at 1¼ percent yearly on the principal amount outstanding, with a service charge of 3/4 of 1 percent yearly on principal amounts outstanding. It was specified that total disbursements of the loan would be made within a period of 2½ years. The Corporation for National Development was guarantor of the loan (del Río and Alegría, 1968, pp.44-45).

The pace was rapid toward completion of the construction projects. Under the general direction of Rector Gómez Millas, a team of architects and officials of the University of Chile completed plans and specifications for the projects. Martin Dominguez, professor of architectural design at Cornell University, and Albert Fine, consultant from the University of California, contributed advice and assistance to Dr. Sálas and others who were engaged in the work. Once begun, actual construction at three sites was completed in 360 days, and within 540 days at the other two locations. Earthquakes, storms, and strikes in the supplying industries caused some delays (Ibid., pp.41-43). A heavy share of the project's costs was carried by the University of Chile. From 1963 to 1967 a total of 10,845,100 escudos ($3,473,400 U.S.), approximately two-thirds of the total investment in buildings and facilities, was put up by the University of Chile (Ibid., Cuadro No. 3). A substantial sum of the Ford grant was expended for laboratory equipment, facilities and library development, although the major part was devoted to the development of teachers. The Chilean investment in the five Colleges was the equivalent of $6,460,982.19 U.S. by the end of 1969, in relation to the BID loan of $2,300,000 for construction and equipment (report from the Oficina de Construcción Universitaria, U. de Chile, Jan. 13, 1970). In addition, the Arica Center received new construction and facilities through contributions from the Council for Progress of Arica, amounting to 7,306,460 escudos during 1967-1969 (Junta de Adelanto de Arica, document, Jan., 1970).

The planned enrollment capacity for the five Regional Colleges in the first stage of construction was 4,200 students; by 1969 enrollment was 7,230. Additional construction was underway in 1969 at Antofagasta, Arica, and Temuco, and plans for further development of various campuses, including the one at Chillán, have been prepared by the university.

Donations of land to the various Regional Centers have occurred in the following manner (personal communication from Ricardo Alegría, Director of the Office of University Construction, University of Chile, Jan. 5, 1970):

> The Institute of Agricultural Development (Instituto de Desarrollo Agropecuario, INDAP) donated 21.56 hectares (1 hectare = approx. 2.3 acres) in the Fundo Trianón at Temuco.
>
> The government allotted 14 hectares of land, just outside La Serena, for the construction of buildings. A substantial building on the premises is being utilized by the Center.
>
> The government allotted 95 hectares 6 kilometers from Antofagasta for the construction of buildings, besides a sector of an adjacent beach.
>
> Doña Livia Rocangliolo and Don Romeo Castagnini donated 18 hectares of land about 2 kilometers from Talca.

The Municipality of Osorno donated 21.56 hectares of land for use in the construction of buildings.

The Council of Progress for Arica acquired for the Center 4.1 hectares of land, located near the ocean, in the center of the city.

No permanent site for Iquique has been acquired; the Center occupies and rents a governmental building in the central district of the city.

No permanent site for Ñuble has been obtained; the Center occupies a building across from the central plaza of Chillán.

SUMMARY

Increasing pressure for university admission, along with scientific and technological objectives for economic development, allows little chance for educational idealism to reconcile itself with financial feasibility. The University Centers have emerged and grown in spite of financial adversity; their problems differ perhaps only in degree from those that public and private universities face today in virtually all nations of the world. However, administrators, heads of carreras, and instructors of the University Centers in the provinces are deeply aware of the inadequacy of financial support to achieve their objectives and the weaknesses, deficiencies, and sacrifices which have reached into curriculum, staffing, facilities, and services to students.

Convinced of their inability to continue the educational program throughout the 1969 year, the administrators, instructors, and students at the Temuco Center fought long and hard to obtain a special congressional appropriation. On the whole, the Centers attempted during 1967-1969 to work with a current expenditure budget which in real terms rose only 12 percent while enrollment moved upward 35 percent.

The plight of the Regional Centers was in large part a consequence of the economic situation of the University of Chile. During 1965-1968 the university's enrollment increased more rapidly than that of the private universities, yet the government support per student dropped 27 percent from the first to the last year of that period, while the state's total support to the private universities went up nearly 11 percent. In 1968 the Regional Centers received current expenditure budgets which constituted 7.8 percent of the university's budget, even though the enrollment of the

Centers comprised 26.7 percent of the total for the university.

As is the case for all of Chilean higher education, the University of Chile and its Regional Centers derive preponderant support from the national government. Some revenue is paid to individual Centers as a result of special taxes, in Ñuble province, and on various industries in other regions. In the first decade of the University Centers two notable forms of assistance came from the Inter-American Development Bank and the Ford Foundation. The first agency assisted in financing the first stage of construction for five Centers and the Ford grant was earmarked for the development of instructors, for technical assistance as needed, and for assisting in the development of libraries and laboratories. The possibilities of new or additional financing of the Regional Centers are contingent mainly upon the economic growth of Chile, and the priorities and tax policies of the national government. A number of attempts have been made recently in different regions to develop support for revision or introduction of special excise taxes on industries in order to aid individual Centers. Considerable support has been expressed for a special tax on university graduates, who would be expected to pay over an extended period an approximation of the costs of their university education.

The financial situation of the Regional Centers warrants consideration of a number of cost-related ideas directly affecting performance. In curriculum development, the introduction and the duration of carreras should be related to need and consideration might well be given to the costs of duplicating staff and facilities that are available elsewhere, the alternative costs of providing residence facilities for students from other provinces, and the readiness of the job market to absorb graduates in the specialization. Further study may reveal the feasibility of training students in a family of skills and knowledge which will enable them to learn and adapt in a variety of occupational fields.

Recent research in Chile has indicated that students with an incomplete university education may derive economic benefits equivalent to those who graduate. It is most important, however, to stress the need for a maximum retention rate of students and to build carreras and an educational environment which will facilitate achieving it. The efficiency of the Regional Centers is suggested to some degree by an analysis of educational inputs and outputs in terms of student-years of completed study during the period of 1966-1969. Like most statistics in higher education, however, the measures should not be used as an evaluation of individual campuses, but rather as a means of identifying problems and improving educational effectiveness.

CHAPTER 11

PERSPECTIVES

The Regional Centers of the University of Chile emerged and expanded during the 1960s as Chile coped with problems of urbanization, agrarian reform, economic development, population growth, and the need for fundamental change at all educational levels. As principal centers of higher education in the provinces outside the three major cities of Chile, the eight Regional Centers carried a heavy responsibility at the beginning of the 1970s. While this study has been concerned with the origins, objectives, functions, and development of these campuses to 1970, the emphasis has been upon their conditions, problems, and achievements by the end of their first decade. Furthermore, the scope of the study included consideration of the Centers' influence upon their communities and regions and upon the University of Chile itself.

EVOLUTIONARY CHANGE DURING THE 1960s

In retrospect, the educational vision and leadership of Rector Gómez Millas and Professor Irma Sálas were essential in conceptualizing and establishing the Regional Colleges and enabling them to persist through a period of organizational change and university reform. These two educators were dedicated to the new type of institution as a means to increase access to the university by decentralizing its operations throughout previously neglected regions, and thus serving better the expanding needs of the Chilean people. Both worked effectively within the university and in the provinces to secure the acceptance and endorsement of the regional college idea: two to three years of university-level study in general education and professional training.

Important as personal leadership was in the origin and development of the Regional Colleges, other influences affected the eight campuses in the north and south of Chile. The people in the provinces, represented by political leaders and civic-minded organizations, demanded their own institutions to give educational opportunity to youth and to aid in regional development. It was generally acknowledged that social mobility from the lower socioeconomic levels was feasible only with the aid of higher education, and that young people from these groups could not afford to attend the university in Santiago. Too, some people believed that the provinces were suffering from the loss of able young men and women who went to the university in Santiago and did not return to their home environment. Within the

University of Chile it was recognized that educational and cultural opportunities should be offered to persons outside the metropolitan areas. However, the formal structure and traditional professional programs of the university were not adapted to meet the social, cultural, and economic needs of the changing Chilean society. Nor were the instructional programs of the secondary schools and the university integrated to facilitate continuity and success at the university level. These situations indicated that a new and different type of institution should be set up to serve various regions in the provinces.

In the selection of locations for the first five Regional Colleges--Temuco, La Serena, Antofagasta, Talca, and Osorno--consideration was given to the probability of (1) a sufficient flow of secondary school graduates in the region to assure stability and reasonable growth of enrollment; (2) opportunities for future graduates of the Colleges to secure employment in their respective regions; and (3) support of the region, evidenced by financial contributions and donation of a campus site. The Regional Centers at Arica and Iquique emerged from limited programs fostered by the University of Chile in Santiago and its outpost at Antofagasta. At Chillán, in the province of Ñuble, a Center was founded through a successful drive for a unique national law which guaranteed financing by imposition of a tax on people of the province. This case illustrated the force of political factors in selecting locations. In other instances consultations of the rector with congressional representatives and local leaders also were important in the decisionmaking process. In all eight Center communities widespread local support and interest characterized the establishment of the new institutions.

Enrollment trends during the 1960s indicated that the Centers were responding to the demand for higher education and were serving relatively heterogeneous student bodies. The Centers' enrollment, as a proportion of total enrollment in the entire University of Chile, rose from 23 percent in 1966 to 28 percent in 1969. For the period 1967-1969 the enrollment of the eight Centers rose at an annual rate of 17.8 percent, in comparison with an all-university rate of 12.4 percent and a Santiago-Valparaíso rate of 9.8 percent. By 1970 total enrollment in the Regional Centers had risen to 10,275, with individual Center enrollments ranging from several hundred to more than 2,000. Dividing Center enrollments into four carrera groupings, the distribution in 1969 was: agriculture and rural development, 12.7 percent; administration, technology and applied arts, 23.4 percent; health services, 19.6 percent; and education, 44.0 percent. The Centers were attracting a relatively high proportion of women students: approximately a 60-40 ratio of women to men compared to a 40-60 ratio for the University of of Chile in Santiago and Valparaíso.

The University Centers continually have served a considerably higher proportion of students from families of lower socioeconomic levels than has been the case at the University of Chile in Santiago. Parents of students in the provinces generally have completed fewer years of schooling than those of students in Santiago, and a far higher proportion of fathers of Center students are in low-income and nonprofessional occupations. In 1970, more than one-fourth of the students obtained loans from the National Council for Student Aid and Scholarships.

The pace of evolution of the Centers was rapid during their first decade. During the early and middle years of the 1960s the central coordinating agencies for the Centers (Department of General Studies and then the Coordinating Department of the University Centers) and the Centers themselves worked to develop a suitable organization, build a corps of qualified instructors, plan the curriculum and allied services, secure necessary construction, and generally serve needs of the regions. It was often difficult, if not impossible, to set priorities because everything had to be done at once.

Transformed by university action in 1965 from Regional Colleges to University Centers, the campuses in the provinces became more closely allied with the central university structure. University decrees eliminated the directive authority of the Department of General Studies in Santiago, authorized the Superior Council of the University Centers, and specified that directors of the Centers be directly responsible to the rector. This transition in status permitted the regional campuses to introduce four-and-five-year carreras and so relieved them of attempting to maintain transfer carreras in the face of prevailing opposition and apathy of Santiago faculties concerning the acceptability of transfer students at the central campus.

Authority within each Center was held by the director, subject of course to university policy and the rector. Generally, coordinators of academic and professional studies, library, extension, guidance, student welfare, and budgeting functioned as service department heads. The chiefs of carreras exercised much influence and leadership in the development of educational programs. They and the coordinators often served on a technical advisory council over which the director presided. These local operations, under one chief officer, enabled the Centers to achieve coordination and widespread sharing of staff and facilities which were almost impossible in the structure of nearly independent faculties and schools in the university. As the University Centers grew stronger their staffs and students became increasingly aware of their problems and also their relationship with other segments of the university. Even after the 1965 transition the Centers continued to be a quasi-system within the university, without representation in its decision-making councils.

The Centers' pattern of organization changed in the late 1960s, for one of the objectives of university reform was to expand the participation of the university community in policymaking at all levels, so that unipersonal control could be minimized. Center commissions and their representatives engaged vigorously in the deliberations of university reform, resulting in the Centers' gaining status as sedes of the university in 1969. Although the precise character of this change probably will be resolved only after the passage of considerable time, the pending proposals for a new university statute signified that the sedes would have representation in the policymaking bodies of the university as well as more internal responsibility and authority. Certainly the processes of university reform and the status of sedes resulted in further evolution of the Regional Centers, especially in their participation in universitywide activities.

As a result of universitywide reform decisions, the Regional Centers introduced co-governance by weighted voting power and representation of academic staff, nonacademic personnel, and students. Complemented by the new scheme of organization, this diffused authority and responsibility among groups and councils rather than among individuals who occupied positions. Additional new features of the Centers' organization, which reflected changes throughout the University of Chile, included the election of the principal campus and department officials, and the formation of normative councils for the Centers and their respective academic departments. These organizational features were effected in most Centers during the latter half of 1969. It was anticipated that the major Center officials in each case would be titled vice-rector and general secretary in accord with the preliminary decisions of the university community and plans for the new national statute. Therefore, the chief officer of each sede would be a vice-rector of the University of Chile instead of merely director of the local Center. Determination of academic departments in each Center was preceded by extensive discussion of various plans and sometimes by consultation with the reform commission of the university. Differences of departmental organization existed among the Centers, for the identification of departments was adapted to the requirements of each campus. Similarly, differences in organizational structure were evident prior to the recent reforms, even though general regulations specified a pattern of coordinating specialists for the guidance of the Centers. Some campuses had coordinators of studies, others did not. Some had active coordinators of extension, others did not. Most Centers maintained a modest staff of professional guidance workers, while one or two gave little attention to guidance services.

Relationships of the Regional Centers with the university in Santiago in 1969 were mainly with the rector, the Superior Council of the university, the Superior Council of the University Centers, the Technical Secretariate of the University Centers, and the faculties which had general jurisdiction over the respective carreras. The Center directors, or vice-rectors to be, were directly accountable to the rector. The Superior Council of the Centers, presided over by the rector and including Center directors and the STCU director, continued to function as a decision-making and recommending body, subject to the rector and the policies of the university; the council's future in the reorganized university was not yet decided. The Technical Secretariate served the sedes and provided liaison between them and the faculties as necessary; assisted in curriculum development, guidance and admission services, and recruitment of instructors; and offered technical and coordinating services in administrative and budgetary affairs.

A feature of the original plans for the Regional Colleges was to offer training through short-term carreras in middle-level specializations essential in Chile's developing society. The planning of carreras was based generally, until the middle 1960s, upon examination of available studies of manpower needs in Chile and regional inquiries and special studies to ascertain regional needs. Indeed, the Centers pioneered in Chile in the development of numerous short-term carreras which prepared students for entry into intermediate-level occupations. Of the 34 carreras which were offered in 1969, 20 had a duration of less than four years; a majority of them were initiated by the Centers and were not offered at the university in Santiago. Enrollments in short carreras at the eight Centers in 1970 were nearly double those of the University of Chile at Santiago and Valparaíso.

Since their establishment as centros universitarios in 1965, various Centers have introduced full four-year carreras in nursing, social work, and medical technology, and five-year carreras for the preparation of secondary school teachers with subject specializations. These longer carreras are parallel in course work to those of the university at Santiago, so that the achievement of the Centers in these areas lies mainly in acquiring and organizing staff, materials, and facilities to offer suitable preparation. Still, in a number of these fields Center staffs have developed field experience for students and have engaged with university faculty representatives at Santiago in review and revision of the carreras. In recent years the Centers have concentrated on the development of long-term carreras, but the short carreras have continued to receive attention as an integral feature of the original Regional Colleges.

The Regional Centers have continued to carry out the other functions which were ascribed to them at the beginning: providing academic experience in general education and the basic sciences within carreras; giving guidance services to students; and contributing to the cultural and developmental activities of communities and regions. Studies in general education and the sciences constitute the equivalent of a semester or more of carreras in the Centers. Exceptions are the parallel university plans of study over which the Centers in fact have had no control. The program in general education encompasses courses in arts, languages, philosophy and psychology, social sciences, and the natural sciences and mathematics. Even though the natural sciences and mathematics are included under the umbrella of general education, they are given separate identity in the carreras. This practice reflects the continuing emphasis upon science and technology in preparing students for careers.

The guidance services, though seriously understaffed in some Centers, have been a fundamental instrument for trying to achieve student-centered programs. Functions have included guidance and admission services for secondary school students, group guidance through orientation courses for entering students, individual and group services on problems of student achievement and retention, and regional coordination of activities in the national program of university admission.

The mere existence of the Regional Centers doubtless has brought new experiences and ideas to residents of the provinces. Isolation can be stultifying in areas remote from the country's center of power and culture; the Centers have done much to offset this possibility by stimulating the cultural interest of people in their regions. They have offered programs of music, drama, and art in halls, theaters, plazas, neighborhoods, and villages. To some extent they have provided special summer schools and conferences in cooperation with the university's department of cultural extension. Various campuses have given special services to the region, such as the testing of construction materials at Arica. Centers have scheduled lectures, conferences, and seminars, and they have arranged courses and programs for teachers and other professional groups, as well as projects to improve and enrich the lives of residents in urban neighborhoods and remote villages. Several Centers have introduced programs to further regional exploration and developments. An important contact with the community is the field work of students from many carreras, including social work, nutrition, home guidance, teaching, administration, and agricultural technology. Their work in hospitals, schools, neighborhoods, youth centers, and other settings has been a helpful stimulus to the region.

Employment of a considerable proportion of Center graduates in the provinces is evidence that the University Centers are meeting certain regional needs for specialized manpower. The retention of Center graduates in the provinces is very high; provinces outside the urban areas of Santiago and Valparaíso seem to be retaining all but about three percent of the graduates who came to the Centers from those provinces. Of the large majority of responding graduates in this study who were employed, more than four-fifths were located in the Centers' service zones. Forty-four percent, slightly less than the proportion of students originating from Center communities, were employed and living in those localities. If nearly three-fourths of the Regional Center students continue to come from the Centers' service zones, as they did in 1969, graduates may be expected in large measure to remain in the provinces when appropriate employment is available.

During the period 1967-1969 the Regional Centers had an increasing number of graduates. The large majority of graduate respondents in this study had been employed some or all of the time since their graduation. Slightly less than half had engaged in their specializations all or a major portion of the period since securing their first job after graduation. A substantial majority of the responding graduates in the following fields had been employed in their specializations all or a greater part of the time since their graduation: chemistry technology, elementary school teaching, food technology, and nutrition. On the other hand, nearly one-third of the sampling had not been employed in their specializations at all; a majority of the graduates in administration, public administration and home guidance were employed in fields other than their specialization.

To recapitulate, at the beginning of the 1970s the Regional Centers had progressed considerably toward their objectives. Under the leadership and coordinating activities of DEG, DCCU, and STCU, they had developed into functioning campuses with a considerable body of students. As arms of the University of Chile, they had extended an innovative form of higher education into most of the Chilean provinces and in doing so constituted a major geographical decentralization of Chile's principal university. They had introduced and modified numerous short-term carreras designed to prepare students for middle-level occupations emerging in Chile's changing economy. As a result of the evolutionary processes, they were more closely integrated with the main structure of the university, and they also offered four- and five-year carreras in a number of fields. Students at the Centers came largely from their service zones, and the Centers consistently attracted a relatively high proportion of students from families of lower socioeconomic levels. This increased access to higher education appeared to be an important key to social mobility. A large majority of the increasing flow of graduates evidently were employed and remaining in the provinces, thus providing a measure of hope and vitality in efforts toward regional development. The output of trained graduates, the programs of cultural and developmental services in the regions, and the stimulus and opportunities which they afforded to adults, youths, organizations, and institutions signified that the Centers had exercised a considerable and constructive impact upon the provinces.

PROBLEMS AND ISSUES

Notwithstanding the advance of the Regional Centers during their first decade, their future is still uncertain. Current issues associated with the regional sedes are briefly presented here to indicate points to be resolved in the immediate future.

Meeting Regional Needs

It is of concern to instructors and administrators of the Regional Centers that they meet regional needs. Naturally one wonders what regional needs are and how they differ from national needs. The latter may be pervasive, general, or institutional, and prevalent in all sectors of the country. For example, an infrastructure for transportation, electrical power, and water supply is basic for national economic development. Within different regions the infrastructure may vary with natural resources, population, climate, topography, urbanization and the level and type of agricultural and industrial development. In other terms, regional needs include particular needs of people living in a region and are complementary to national needs. The Centers have striven valiantly to identify regional needs for specific carreras, and yet administrators, instructors, and prominent residents remain perplexed and frustrated because, in the views of many, the Centers' carreras and the regional needs for manpower do not coincide. The problem is complex. First, the alleged need should culminate in suitable employment opportunities for trained graduates. Second, training requirements should be compatible with human and material resources of the Center. Rarely, if ever, would the output of graduates in a specialization correspond exactly with unfilled needs for such specialists in a given region. The Centers face this disparity of graduates and employment opportunities both regionally and nationally, in fields such as agricultural technology, home guidance, and elementary school teaching. The Centers' concentration upon teacher education and the dearth of carreras in science-oriented occupations may signify an unbalanced curriculum in relation to manpower requirements and the supply of specialized graduates from other institutions. With three-fourths of the Centers' students in 12 carreras in 1969, it seems increasingly necessary to conduct follow-up studies of graduates in the fields of heavy enrollment concentrations and to review periodically the employment trends in other specializations. Whatever is done, more information is necessary to identify regional manpower needs in middle-level occupations. National manpower studies thus far have concentrated upon occupations which require four or more years of university study. Regional analyses and plans, such as those now being prepared by the National Office of Planning, provide a base for future surveys designed to project regional requirements and specifications for developing occupations.

Besides offering relevant carreras and opportunities, meeting regional needs means improving the capacities of human resources in the area, helping professionals and other adults to upgrade themselves in their careers, providing cultural stimulation throughout the region, and studying the characteristics and resources of the zone. Prior to the introduction of the national university admissions program in 1967, the individual Centers served mainly local students who applied for admission to the Centers; the Centers conducted their own admissions program and used a series of tests to diagnose the students' attributes and assist in choice of carreras. Nationwide competition for admission to different institutions and carreras is keen. Students from low-income families are likely to seek admission to the local Centers, but they have difficulty competing with applicants from Santiago. The admissions aptitude test scores of more than nine-tenths of the Center students entering certain carreras in 1969 were not sufficiently high to enable them to qualify for similar carreras at the University of Chile in Santiago. Consequently, Santiago secondary school graduates, who presumably have had the benefit of a superior training, have a good chance to secure admission to one of the Regional Centers if they do not qualify for the university in Santiago. Recently, a rising proportion of the Centers' entering students have come from Santiago. If this trend should continue, it may be desirable to use a preferential selection system for applicants from the Centers' service zones. Otherwise, the sedes in the provinces may relinquish in part their function of meeting regional needs.

Filling the needs of students in the provinces implies a goal of equalizing their educational opportunities for choosing a carrera of study. Since each Center has a limited number of carreras, it is important that students be permitted to transfer to another campus without academic penalties. Transfer of Center students from one carrera to another was feasible but uncommon in 1969; in the university as a whole regularized transfer procedures had not been established, although occasionally transfer students were admitted by university faculties. The introduction of a credit system, as contemplated in the university reform movement, would facilitate the transfer of students and tend to equalize study opportunities and choices for students in all regions. The needs of regions and students may be met more effectively by regularizing continued study by transfer with credit to other sedes of the university, whenever necessary to complete carreras, and also to enter long-term carreras after graduating from short-term carreras. This would tend to reduce duplication of carreras and permit more specialization of Centers in specific fields. Such an approach would require consideration of maintaining residence accommodations for students from other areas, for board-and-room facilities in Center communities is limited and expensive. This would tend to equalize choice of carreras for all students, provided students could obtain necessary financial aid.

Others in the provinces who desire education and training include professionals and employees who seek to upgrade themselves in the labor market. The Centers have offered various programs to professionals, especially teachers, with financial assistance by the national government. The desire of most graduate respondents for continuing education to strengthen their professional and general education indicates that Centers might explore what is needed and how it could be done. By definition, prospective full-time evening students are usually employed and unable to attend the day program. A number of the Centers have experienced difficulty in maintaining even one or two carreras for this group, and in 1970 regular evening students comprised only six percent of the Centers' total enrollment. It would be unfortunate to lose any momentum that has been gained in the evening carreras, for the future demand for this form of education seems likely to increase in Chile. If fulltime university study is not imperative for the applicants, and if satisfactory university and student financing could be developed, less intensive evening studies could be offered in selected fields.

To meet regional needs and fulfill their mission, the sedes in the provinces need to explore means of fostering research and improving extension services. As sedes of the university, the Centers were assigned the function of research, as well as teaching and extension; planning for reasonable development of all three functions will require a reassessment of available resources, determination of priorities for satisfying regional needs, and a program of staff development. When staff members have been employed primarily to teach and they have sixteen hours of classes weekly, they can hardly be expected regularly to conduct research. Although research has been highly limited in the Centers, some of them have been active in the classification of regional resources, archaeological exploration, ecological expeditions and specimen collections, and analysis of certain social conditions. Research may take so many forms that conceptualization is difficult. Considering the stages of development in the Centers, it seems best here to regard field studies as the type of research characteristically feasible. In the provinces field studies could be carried out in cooperation with local schools, industries, health services, and neighborhood or community organizations. Considering the involvement of the Centers in teacher education, educational research in the schools would be especially promising. If staffing in the social sciences were strengthened, a great deal could be done in studying social, economic and political behavior in the provinces.

Prominent residents from nearly all Center communities gave strong evidence of support for the local Centers, but this position was tempered by criticism and a desire for improvement. They were concerned that the Regional Centers had isolated themselves from the people of the communities and that instructors did not know the community. It may be inferred from this situation that the Centers' programs of extension and community services in 1969 were not sufficient to satisfy regional needs or warrant indefinitely the support and goodwill of community leaders.

Developing Staff

The current status and the prospective growth of the sedes in the provinces indicate that development of staff will be of primary importance for years to come. In general, an instructor at a University Center in 1969 held a degree from the University of Chile, had taught there for three years, had two years of teaching experience prior to engagement at the Center, and was teaching sixteen or more hours weekly, if full-time, usually in his specialization. Difficult as it is to obtain full-time instructors in professional specialties, approximately two-thirds of all class- and laboratory-hours in the Centers were taught by full-time instructors. This is a significant achievement since maintenance of full-time instructors has been a serious problem in Latin American higher education. Low salaries and lack of a professional commitment to teaching have been conducive to simultaneously holding two or more jobs. Most instructors interviewed in the Centers intended to continue in their profession, and the large majority wished to remain at the Centers where they were employed. The minority who planned to leave the Centers expressed concern about matters such as the salary level, the inadequate budget for equipment and materials, the absence of stimulus and incentive, the need for housing, and the desire to bring their families together in one location. Yet the majority said that the Centers supported innovation and experimentation as far as possible.

Administrators and instructors who were interviewed in this study gave first priority to programs of staff development in considering needs of the Centers. More than three-fourths of the responding instructors reported a desire for collaboration or consultation with university specialists in their fields, but only a small proportion were receiving such assistance. Some of those who had completed graduate studies abroad believed that their professional knowledge and competence had declined afterward because they had been unable to keep abreast of their specializations. Among the large majority of instructors interviewed who had long-range professional plans, strong preferences were expressed for opportunities to consult with specialists in their fields, carry on advanced study in other countries, or participate in seminars and other forms of professional development either in Chile or elsewhere. Replies from instructors clearly indicated that the location, duration, and form of advanced professional training were relatively unimportant, but that opportunity for such experience was primary. Continuation by the University of Chile of a budgetary allowance for perfeccionamiento, such as that provided for in 1970, would be helpful in equipping the sedes in the provinces to meet their responsibilities in teaching, extension, and research.

In view of the fact that chief administrators and department heads are elected, in accord with the principles of university reform, it may be desirable for the University of Chile to consider introducing programs of orientation for such officials. Responsibility for such programs could rest with experienced Center administrators and executives and specialists from the university in Santiago.

Financing

Many prominent residents, graduates, instructors, and administrators generally agree that financing of the Regional Centers has been inadequate in relation to their needs and objectives. The majority of responding instructors believed that the following facilities or services were inadequate and unsatisfactory: library collections in specialized fields, professional journals, laboratory and audio-visual equipment, instructional materials, classrooms and instructors' offices, and technical and secretarial assistance.

The national government of Chile contributes heavily to the support of private universities as well as public universities. In view of comparative enrollment increases, it has been evident in recent years that the University of Chile has fared less well than the private universities in sharing the national government's budget for higher education. The Centers, in their turn, have received from the university a far lower proportion of the university's budget than their enrollment might warrant. Even though their enrollment in 1969 comprised 28.0 percent of the total enrollment of the university, they obtained only 7.9 percent of the university's budget for current expenditures. The real annual operating budget of all Centers combined rose 12 percent from 1967 to 1969, while their total enrollment increased 35 percent. In view of the varied needs and activities of the University of Chile, and the concentration of this study upon the Centers in the provinces, it would be unreasonable to judge or even speculate upon the validity of the university's decisions in allocating funds to the Centers. Nevertheless, it was evident in 1969 that inadequate financing had restricted the Centers in curriculum development, acquisition of resources, and rendering of community services. With demands for resources increasing at all levels of education, it is easy to appreciate the difficulty of obtaining additional financial support. Responses from prominent residents in the Center communities gave little reason to hope for any substantial increase of financial assistance from the regions. As a result of national tax laws, regional sources of financing are fundamental to the Ñuble Center, and important for the Arica, Antofagasta, La Serena, and Talca Centers. Various Centers have attempted jointly or individually to augment their resources by modification of tax laws applicable to regional industries. This situation seems unavoidable at present, in view of the serious needs of the Centers, but it also demonstrates the need for working toward coordination of financing for the University of Chile and other institutions of higher education. If no improvement occurs in the financial support given to the Centers, it will be their responsibility, with university approval, to continue reviewing their pattern of priorities and to do whatever is feasible with the financing available. Resolution of the problem appears to be contingent principally upon the revenues and priorities of the national government.

Facilitating Student Retention and Achievement

The preparation, diligence, and academic persistence of students merit continuing attention. A large majority of instructors interviewed said that only a minority of entering students were prepared to carry on work at the university level. Moreover, most instructors said that only a minority of students study regularly; more than a third of the sample of responding students noted that they studied very little. In view of the large number of hours for class meetings in different carreras (average of 25 to 34 each week), students in many fields have little time outside class to study. Yet the great majority of instructors regularly give assignments for students to complete outside class. Another complicating factor is that textbooks are difficult to obtain, and many students rely upon multiple copies available in the Center libraries.

Although causes of dropping out of school are not fully known, the principal reason for doing so evidently is economic need, which often signifies that the student must obtain employment in order to assist his family. Even with a high proportion of students from families of lower socioeconomic levels, retention rates from the first to the second year of study usually have been above 70 percent since 1966 in the six Centers which have larger enrollments. The situation is less sanguine with regard to the ratio of admittees to graduates. An analysis in several carreras showed that a maximum of 2.3 admittees were necessary to obtain one graduate. Most of the Centers have maintained an active and efficient guidance service conducted by one or more professional counselors. This activity, with collaboration of the student welfare service, is important in orienting students to the Centers, and assisting them in resolving academic problems and continuing their studies.

Achieving Effective Organization and Intra-University Relationships

During the 1960s the Regional Centers experienced fundamental changes of status and organization. At the turning point of the next decade university reform had brought tripartite representation in campus governance, election of various officers, and university and campus reorganization, including the formation of departments. The ways of achieving effective organization and intra-university relationships are likely to be variable and difficult. Academic personnel, students, and nonacademic staff members may engage for the most part in constructive efforts toward enabling the Centers to achieve their organizational objectives, or struggles for power and political commitments, even among minorities within groups, may impede and undermine the organization and administration of the Centers. Freedom of expression seems deeply rooted in Chilean higher education, so that suppression of free inquiry is not likely to come from formalized action within the university. Regardless of prevailing conditions, comments of Center directors indicated that much experience and deliberation would be necessary before Center councils and departmental units fully understand and work in accordance with their established roles. In minimizing the authority of individual officers and maximizing that of representative bodies, the day-to-day operations of individual officers may be hampered by delayed decisions or uncertainty. The distinction between policy to be formed by councils and an interpretation of policy to be made by individual officers or an administrative committee is not always clear, even in institutions whose organizational structure has existed for many years. Organizations and decisionmaking processes hardly ever stand still in changing institutions, and probably the Centers, as integral parts of the University of Chile, will be no exceptions.

Relationships between the sedes in the provinces and the faculties in Santiago have been based upon the responsibility of individual faculties for those carreras within their jurisdiction. The form which this relationship takes in the future may be another aspect of the evolution of the Centers. Recent experience indicates that faculty representatives are tending to be less directive and more collaborative in their discussions with personnel from the Centers. In 1969 there was considerable feeling among Center personnel that the Santiago faculties should continue their supervisory function to assure the maintenance of the same norms and carrera patterns throughout the university. This relationship could become less welcome as the Centers develop, for standardization of carreras could stifle innovation and experimentation. On the other hand, the supervisory function conceivably could be used to encourage curricular changes and experimental projects.

Whether any advisory or coordinating body should be maintained for the Centers alone was a question which had not been resolved at the beginning of 1970. Since the Centers have representation on the university policymaking body, it could be unnecessary to continue a body such as the Superior Council for the University Centers, which was a means for Center directors to communicate with the rector, as well as reach decisions jointly with faculty representatives and the rector concerning various matters not requiring new university policy. On the other hand, the characteristics and special problems of the sedes in the provinces, in comparison with those at Santiago and Valparaíso, may warrant the continuation of a special deliberative council consistent with the university reorganization.

After experiencing a decade of evolutionary change, Center directors in 1969 were cognizant of the need for continuing a technical and coordinating unit such as the DCCU and the STCU, for the Centers. These two successive services, like the earlier Department of General Studies, were dedicated to the development of the campuses in the provinces; but, unlike the DEG, they had virtually no decisionmaking role. They have functioned importantly in the areas of curriculum development, evaluation, testing, teaching methodology, admissions, guidance, and, recently, in recruiting and budgetary activities. Regardless of the direction which the Centers travel, their implicit need for continuation of technical services is readily evident. The geographical distribution of the regional sedes increases the difficulty of communication with each other and with the central offices of the university. They probably would benefit from services, such as STCU, which would simplify communication with faculties and central university offices and at the same time provide stimulus and inputs conducive to good planning, self-analysis, curriculum development, effective teaching, and better service to the regions. In effect, the sedes in the provinces would have a technical resource and ally. A program of technical services can be a major force in aiding regional campuses to build themselves as dynamic and effective institutions of learning. The issue here is simply whether technical and coordinating services will continue to be rendered to the Centers, either as a separate group or as units within the university.

Planning for Future Enrollment

Enrollment projections are related directly to planning of finances, facilities, and personnel. According to a 1970 university enrollment projection by the University of Chile office of planning, the eight Regional Centers may be expected by 1975 to have a total enrollment of approximately 13,500, an increase of 44.5 percent from 1969 to 1975. This projection has been derived from the estimate that the institution's enrollment from 1969 to 1975 would increase approximately 15,000 and from my assumption that Regional Center enrollments would comprise 28 percent of the university's total enrollment, as they did in 1969. On a year-to-year basis this growth would be considerably slower than the 17.8 percent annual rate of increase during the years 1967-1970. If this projected enrollment is realized, decisions will be required regarding augmentation of staff, facilities, and curriculum. Assuming that the door to university-level studies is kept open for all secondary school graduates in the provinces, additional financing will be required by the Centers during the 1970s if the prevailing scope and quality of their educational services are to be maintained.

Reviewing Geographical Distribution of Centers

If two- and three-year carreras are to be equally available to secondary school graduates throughout Chile, it may be necessary to review the geographical distribution of the Regional Centers and to reconsider the feasibility of developing such specializations on the Santiago and Valparaíso campuses of the University of Chile to the extent that need for them arises with further economic development. Any planned expansion of the campuses featuring short-term carreras probably would be preceded by an examination of such services by the State Technical University, as well as other post-secondary institutions. Presently in the provinces it seems as if the campuses of the University of Chile are well distributed for the most part. Perhaps it would be justifiable to develop the venture at Iquique as a branch of the Arica Center, for developments in the Iquique area so far have given little evidence of need for a separate campus. Enrollment growth at Iquique has been slight, a satisfactory site has not been obtained, and local aid has been limited by the economic stagnation of the region. The financial situation of the existing Centers provides no argument for increasing their burden by allocating available resources among additional sedes. Nor is there evidence of unfilled demand or need in the provinces, except that which arises from occasional expressions of local aspirations and pride.

As the city of Santiago and its surrounding areas increase in population, it would seem reasonable to inquire whether one or more new campuses are necessary there in order to give suitable emphasis to preparation for intermediate-level careers. (A detailed study of the San Miguel area was completed in 1964.) Since the University of Chile in Santiago now offers short-term carreras, it may be assumed that the need for such training may be met by various locations of the university in Santiago and at its campus in Valparaíso. It is dubious, however, that a rising demand for such specializations can be met successfully by faculties interested principally in education for the established professions.

In 1970 the cities of San Fernando and Rancagua, about 70 and 120 miles respectively south of Santiago, initiated efforts to establish an institution of higher education. These instances, as well as the situation in Santiago and its more immediate suburbs, warrant careful study. Consideration needs to be given to the projected flow of secondary school graduates, the educational needs of adults, the number of admission places in the universities, and the specialized labor needs of business, industry, and government.

Deciding the Future Course of the Centers

The future course of the sedes in the provinces is one of the most critical issues which confront the decisionmaking bodies of the University of Chile. One choice for the Centers might be a continuation of the present course. This would be a conservative furtherance of short-term carreras, considerable emphasis upon teacher education, and a leaning toward development of four-year carreras. Center administrators who were asked whether short-term and long-term carreras could coexist responded that they were mutually stimulating and reinforcing to students in either grouping. But the history of higher education in other countries does not offer much hope to those who wish to preserve short-term carreras while attempting to develop into a full-scale or even a small-scale university. The short-term carreras tend to be neglected in favor of the more prestigious long-term specializations. If this were to happen in the Regional Centers, they would lose a major portion of the distinction which they earned in the development of higher education of Chile. Pilot projects might be launched to train students for a group of related occupations, or to develop skills and competencies common to a number of occupations, thus avoiding the frustrating experience of specialized graduates who cannot obtain suitable employment. This approach, along with review and reinforcement of existing carreras, could be combined with two-year transfer curricula permitting specialization in carreras which other university campuses offer.

A second choice for the Centers would be to become complete campuses of the University of Chile, an approach that would have substantial appeal to prospective students and to local residents. On the other hand, such a trend would be incompatible with the results of recent manpower studies which indicate that Chile will have few shortages in the established professions in the 1970s. Nor is there any real evidence that staff, facilities, and finances would be available to support additional complete university campuses in the provinces.

A third choice might be a trend toward specialization in the respective Centers, together with maintenance of the existing carreras. A number of respondents, within and outside the Centers, suggested that each campus might specialize in subjects or fields appropriate to its respective setting and potentialities. The Centers in northern Chile might distribute their energies by specializing in astronomy, archaeology, medicine, mineralogy, oceanography, the arts, or the ecological problems of a desert region. Centers in the southern zone might specialize in agriculture, animal husbandry, Auracanian culture, marine biology, or medicine. Any choice of a specialization should be realistically related to the peculiar features of the sede and its region. Such specializations, if adequately financed, would stimulate research, facilitate closer relationships with scholars in Santiago and elsewhere, and add prestige to the individual Centers. But in this case preoccupation with specialization at an advanced level would endanger the future of the short-term carreras.

A fourth choice for the Centers is whether these campuses in the provinces should be dedicated to the regions by serving primarily their residents, offering carreras appropriate to them, and generally studying and catering to their needs. Within the University of Chile during the period of recent reform, considerable emphasis has been placed upon its role as a national university alert to the problems and needs of the country. For the sedes in the provinces outside the metropolitan areas, this posture of the university implied their having responsibility for helping to satisfy national needs as well as regional needs; this made the Centers' role more complex. The evolution of the Regional Centers to the status of sedes of the university brought them closer to the central structure of the university and evidently to a sensitive awareness of their responsibility for meeting national needs, which could result in a lessening sense of responsibility to the requirements of the regions. No consensus has been reached regarding the characteristics of a regional institution, but several features are evident in the development of the Regional Colleges and Centers: (1) they arose as a response to strong expressions of interest and need by people in the regions; (2) they were examples of geographical decentralization by the university for the purpose of meeting educational and cultural needs of regions; (3) their guidance and admission services have been pointed toward informing and admitting students in the regions; (4) they have striven to introduce carreras which were suitable to regional economic needs and would lead to employment of graduates in the regions; (5) they have been attentive to the cultural and professional needs of residents in the regions; and (6) they have studied the development and resources of the regions, engaging in projects designed to improve the resourcefulness, health, and economic well being of the people. This regional orientation of the Centers constitutes an educational asset that is propitious for future regional development.

The above choices are not mutually exclusive; nor do they exhaust the possibilities. The Regional Centers might complement one another, even though residents in each region would need to be educated to the fact that a full set of carreras is not feasible in many communities. Such decisions, especially concerning the

the nature and character of educational services in each region, will depend upon the university's concept of its functions in the provinces, the degree and kind of decentralization which it desires, the financing which is available, and the propensity of the university to respond to, or resist, political and social pressures from the provinces.

Coordinating Higher Education

Even though coordination of higher education has been a concern in Chile, the scope of this study is confined to the Regional Centers and does not justify a full discussion of the problems and efforts in coordination. But comments of principal administrators in the Centers indicated difficulties arising from local duplication of higher education programs and facilities, or from lack of coordination. Individual Centers have attempted to coordinate their curriculum development with that of nearby institutions. Some sharing of facilities at times has occurred, but firm local agreements are difficult to achieve. Since both private and public institutions of higher education derive their major support from the national government, policies and norms on funding, program development, and capital outlays might be equally applicable. Freedom of teaching, learning, and research must be safeguarded, but this need not signify absolute autonomy in all matters. A considerable number of Chilean educators have expressed the need for coordination and planning of higher education, and a recently passed law on budgeting in higher education shows that Chilean legislators desire to obtain optimal use of public funds. If university autonomy is to be consistent with the public interest, finances for program development and construction would not be used for unnecessary duplication of educational services which already meet the regional or national need.

INFLUENCE UPON THE UNIVERSITY OF CHILE

During the early 1960s many persons engaged in the discussions of the Regional Colleges speculated upon their eventual effect upon the University of Chile itself. It is axiomatic in higher education that the founding of satellite institutions affects inevitably the mother institution. Therefore, it was reasonable to expect that the Colleges would influence the policies and operations of the University of Chile, then centered mainly in Santiago and Valparaíso. Obviously the decisions and attitudes of rectors, faculties, and councils of the University of Chile controlled the curricular trends, construction, and financing of the University Centers, and these actions of university personnel inevitably affected developments of the university in Santiago and Valparaíso.

The power structure and traditional policies of the university necessitated forming and nurturing the new type of institution under a special organizational wing (DEG). From 1960 to 1966 the establishment of eight institutions in the provinces embodied the intent of the University of Chile to decentralize its services and extend them directly throughout most of the country. Previously such moves had been taken at Valparaíso, and to a lesser extent at Antofagasta in the north. The geographical spread of the Regional Centers has given additional meaning to the concept of the University of Chile as a national university. The network of campuses has promising implications for the development of exchange professorships, cooperative research teams, interregional programs of extension, and other ventures that serve the interests of the Chilean people.

Gradually during the 1960s the Centers in the provinces became more closely integrated with the central organization and decision-making operations of the university. Continual interchanges, visits, and conferences occurred among staffs of the Centers and representatives of the various faculties, and a number of the faculties became increasingly aware of the aspirations and potential of the Centers. On several occasions actions of the university's Superior Council resulted in decrees which affected the Centers--their establishment, their relationship with the university in Santiago, the functions of their directors, and other matters. Creation of the Superior Council of the University Centers resulted in periodic meetings of the rector with Center directors so that the identity of the Centers as part of the central university structure was established firmly. Then, in 1968-1969, as sedes of the University of Chile they attained a right to representation in the university's policymaking body and to participate in elections of universitywide officials. The operations of sedes, including the election of a vice-rector and the formation of academic departments in each sede, imply more prestige for those in the provinces and therefore the future likelihood of their having more influence upon the university as a whole.

The simple organization of the individual Centers was a visible example for those in the reform movement who sought to establish a viable structure for the university. A distinctive feature of the University Centers was that each operated under the general direction of a single director. This contrasted with the university in Santiago, where deans of the various faculties exercised a high degree of control. The absence of alternative organizational subdivisions in the Centers enabled specialized staffs and facilities to be utilized for students from all carreras, avoiding such duplication of staff and resources as occurred in the university at Santiago. A change anticipated in the reform movement was that duplication of staff specialists and resources among the university faculties would be minimized.

Admission practices of the University Centers during their early years may have influenced the university in its move toward a national program of university admissions. The Center admissions program, which was separate from the rest of the university until 1967, included visits and guidance in the secondary schools, aptitude and diagnostic testing, and engagement of guidance workers and instructors in the student's selection of a carrera. Guidance workers in the Centers were prepared to provide nearly complete coverage in the provinces for informing and assisting secondary school graduates in applying for admissions and completing the test requirements of the national program. While secondary school grades and aptitude test scores are the basic criteria for the national admissions program, procedures allow applicants to express an order of preference for institutions and specializations. Procedures have been designed to assure impartiality in admitting students, and developments in 1970 indicated that validity studies and experimental tactics may be used.

The commitment to general education, as evidenced in the University Centers, has developed also to some extent in segments of the university in Santiago. Originally it was anticipated that the establishment of the Regional Colleges and the supervising Department of General Studies might lead to a basic program of general studies throughout the university. This hope did not materialize, but short-term carreras of the Centers typically have a substantial block of general education. Similarly, several schools of the university at Santiago have specified common first years of study for their students; for example, the school of political and administrative sciences, the school of economics, the school of engineering, and the school of agronomy.

Most of the short-term carreras which the Centers introduced were new to the University of Chile. The university in Santiago does offer several short-term carreras, but much of the impetus for them has come from the provinces. It is unlikely that the promotion of short carreras in Santiago will present any threat to the status of the standard professional carreras, but it is significant that the University of Chile in its various sedes prepares students for many intermediate-level careers.

Guidance services and concerns for improved teaching and evaluation in the Regional Centers apparently affected the university.

Within the program of university reform it has been anticipated that guidance and tutorial services would be introduced for students, and that a new department would be organized to assist professors in their teaching methodology and techniques of evaluation. The advancement of guidance in the Centers stimulated support for similar student-centered practices throughout the university. The University Centers, along with the Department of General Studies and later the Coordinating Department of the University Centers and the Technical Secretariate, have devoted much attention to methodology and evaluation; chiefs of carreras in the Centers have served importantly in furthering this work. In recent years, heads of carreras have been instituted in various schools at the university in Santiago to coordinate the individual specializations. Furthermore, a number of the faculties have demonstrated interest in the techniques of course planning and curriculum development, and members of the staff of STCU have been invited on various occasions to conduct professional seminars on these subjects.

A stronger nation-wide orientation and shifts in the organizational structure of the University of Chile have been stimulated by the status and progress of the eight Regional Centers. It is difficult to show an undeniable causal relationship between Center activities and subsequent developments of the University of Chile as a whole. It does seem clear, however, that the influence of the Centers has been considerable in admissions, curriculum, instruction, and student services. Their voting power in university elections and referenda has been demonstrable in recent years, resulting in substantial recognition by candidates campaigning for university posts. Probably their greatest influence upon the University of Chile lies in their extending its educational services to the northern and southern zones of the country. The effects of the satellites upon the mother institution during the 1960s were gradual, significant, and to some extent cumulative.

GENERAL CONCLUSIONS ON FOUNDING A NEW TYPE OF INSTITUTION

The introduction of a novel type of educational institution in any social setting logically requires consideration of the need, organizational relationships, functions, and financing for the institution. The conclusions emerging from this study might be useful to planners and educators in other countries who are studying the feasibility of similar ventures in higher education.

It is feasible in a given environment to plan, establish, and foster a different type of institution of higher education such as the Regional Colleges of Chile. The test of desirability is whether it is designed for the immediate environment and serves a recognized need. From the Chilean experience, which was endowed with strong leadership, it may be deduced that the generative blend of forces in the environment were inflexibility of the existing university structure, unfilled educational needs of youth in outlying provinces, demands of regional leaders for higher education, and awareness of the need for the university to adapt in some way to the forces of social and economic change. Concomitant productive features during the formative years were centralized decision-making, a basic pattern of functions and policies, curriculum planning and staff development, and a quest for necessary financial and technical assistance.

In developing a different type of institution of higher education, such as the Regional Colleges, success is contingent upon several critical factors. Judging from the development of the Regional Centers in Chile, primary importance should be given to obtaining an instructional staff with a high level of competence in subject matter and pedagogy, and with acceptance of the objectives and functions of the new institution. In the Chilean experiment in higher education, steady attention was given to recruiting and developing instructors, since a ready supply was not at hand. A major part of the grants from the Ford Foundation was utilized for advanced training in Chile and the United States, and in the early years a salary bonus was paid to offset the reluctance of instructors to move from Santiago to the provinces. Second, an effective plan of organization and administration is essential to set priorities, allocate resources, adopt and interpret policies, and generally expedite work toward institutional objectives. Irma Sálas, as director of the Regional College program, obtained a staff of specialists to assist her in the Department of General Studies and sought Center administrators who were experienced and responsive to the objectives of the Regional Colleges. Third, curricular plans should be suitably responsive to the necessities of the regions to be served. This implies attention to features such as the characteristics of prospective students, the nature of regional development, and specialized manpower needs. The early planning of short-term carreras at the Regional Centers was preceded by examination of manpower data, conferences with regional residents and officials of agencies associated with economic development, and specially arranged studies of manpower requirements.

All institutions of higher education obviously need land and facilities, an adequate operating budget, and regional interest and support. Regional Colleges started their operations in a variety of borrowed facilities, but ground was laid in preliminary planning for the local municipality to secure a suitable site for the new institution: six of the eight Centers obtained permanent sites shortly after they were founded, and municipal and regional leaders were still seeking satisfactory sites for the two remaining Centers in 1969. Buildings and facilities for a number of the Centers were made possible in large measure by a loan from the Interamerican Development Bank. Except the Nuble Center, which is supported by special taxes in the province, the Regional Centers are largely dependent upon funds appropriated by the national government. In most cases, therefore, regional support of the Centers does not imply much financial assistance; nevertheless, the funding from special tax revenues for Arica, Talca, Antofagasta, and La Serena is important to those Centers. Regardless of financial assistance from regional sources, the work of the Centers has been facilitated by regional support and local cooperation in placing students into field work experiences, providing part-time instructors, permitting use of public facilities for exhibits and other presentations, and demonstrating a spirit of endorsement and helpfulness.

The major obstacles to the development of a different type of institution of higher education, such as the Regional Colleges, are raised by organizations or persons who do not approve the objectives of the institution, and who believe that their concepts of higher education will be violated, or their interests adversely affected by the program of the institution. In the case of the Regional Colleges, especially during their first few years, opposition or indifference was registered by deans and faculties of the University of Chile at Santiago, associations or colleges of professional specialists, groups of students at the university in Santiago, and some administrators and instructors in the Centers themselves. Any change, such as the establishment of a novel type of educational institution, intrudes upon cultural attitudes and customs. People who associate higher education only with the ordinary university are likely to accept another type of institution with reluctance, especially if it is designed to offer certain programs which will later require transfer to another institution. Resistance in the university apparently arose from disagreement or uncertainty about the aims and functions of the Regional Colleges and serious doubts that the new institutions would maintain the quality of training and education at the level offered by the university in Santiago; in other words, fear that the Colleges might offer second-rate programs on behalf of a first-rate university.

In a tradition-oriented environment a different type of institution of higher education, such as the Regional Colleges, is likely to be subjected to internal and external forces which result in evolutionary change. In retrospect, it seems as if the Regional Centers were most secure in their attachment to the University of Chile. They had necessary protection which included the services of a central coordinating department dedicated to the advancement of the Centers in the provinces. As enrollment and programs of the Colleges expanded, the directive responsibilities of the Department of General Studies became more formidable. The rector of the university brought the Centers closer to the central university structure, enabling them to veer somewhat from their original course and to introduce four- and five-year carreras parallel to those of the university in Santiago. By 1969 the development of the Regional Centers, and the advocacy of their spokesmen and commissions in the university reform movement, brought them recognition as sedes of the university. Tripartite policymaking bodies, election of officials, formation of academic departments, and a mixture of short- and long-term carreras, with considerable stress upon teacher education, are merely some of the recent conditions which may be forerunners of further change.

The distinctive and innovative features of the Regional Colleges brought significant developmental change to the University of Chile and therefore were generally salutary to Chilean higher education. The Regional Colleges were a remarkably creative venture in the higher education of Latin America. Even though some attrition of the original ideas occurred as missionary zeal was tempered by the practical necessity of coping with complex forces, the sedes in the provinces still have singular opportunities for contributing to Chilean higher education. They can become major forces in working toward regional advancement. If they can foster dynamism, models of free communication, and decisive action in cities of the northern and southern sectors of Chile, the result could be a stimulus to social and economic development in Chile. Probably few other institutions in Latin America are comparably equipped to offer strong and imaginative educational programs to the youth, adults, enterprises, and organized groups of the regions which they serve. The opportunity and challenge lie ahead: to serve well the people of Chile during an era of great social change.

APPENDIX

OBJECTIVES AND METHODOLOGY OF THE STUDY

During late 1968, a survey was made to determine whether a study of the University Centers of the University of Chile would be feasible. The survey included visits to each of the eight Centers, consultation with directors and staff members, and conferences in Santiago with the director and coordinators of the Technical Secretariate of the University Centers. The rector of the University of Chile expressed approval of the proposed study by Dr. George Feliz of the Center for Research and Development in Higher Education, of the University of California (Berkeley, California) and designated the Secretaría Técnica de Centros Universitarios (STCU), to provide liaison and advisory assistance in planning the project.

The general objectives of the study were:

1. To explain the origins, objectives, functions, and development to 1970 of the University Centers.

2. To examine evidence of their progress toward achieving their objectives.

3. To study the cultural, social, and economic effects which they had produced in their respective regions.

4. To consider their effect upon the University of Chile.

The methodology involved perusal of pertinent publications and documents, elaboration of specific objectives and a detailed work plan, preparation of suitable instruments, and acquisition of information by field visits, observation, interviews, and questionnaires. These activities were supplemented by inquiries and conferences in Santiago with administrators and professors of the University of Chile and other persons. The study was developed in three stages: planning and preparation; field inquiries; and coding, tabulation, and analysis.

During the first stage of the study, the interview schedules and questionnaires were prepared by the researcher. In this work and in the translations which followed, he was assisted by the criticism and comments of the advisory group which the STCU director had designated. Structured interview schedules were used with directors of the Centers, heads of carreras and departments, instructors, specialized institutional administrators, parents of students, and prominent residents in the Center communities. Separate questionnaires were organized for students and graduates. Supplementary and specialized inquiries also were prepared for use in interviews with coordinators of studies, heads of guidance services, coordinators of student welfare services, coordinators of extension, and chief librarians. Scheduling of the field visits was effected with the collaboration of officials of the university in Santiago. At each campus the objectives and plan of the study were discussed with the director, with whom communication was maintained throughout the visit. The sequence of visits, each of which extended over a period of several days, was Arica, Iquique, La Serena, Talca, Temuco, Osorno, Antofagasta, and Ñuble (at Chillán). Following the first two visits, all instruments were reviewed. Some questions were deleted and wording was clarified in a number of statements. Care was exercised to assure consistency in the purpose and substance of the modified questions, so that replies at all Centers would be comparable. Inquiries at the various campuses were completed during July through November 1969. The visiting team included the researcher and two Chilean assistants, one experienced in field research and the other an interviewer. Respondents from the University Centers included 8 directors, 29 other administrators (28 of whom also responded to supplemental inquiries for specialists), 53 carrera or department heads, 112 instructors, and 46 students--a total of 276 responses. Respondents outside the University Centers included 12 Center graduates who were interviewed and 229 who responded to mailed questionnaires, 66 parents of students in the University Centers and 68 parents of students in secondary schools, and 65 prominent residents--a total of 440. The combined total of all responses was 716. Data were furnished by 639 individuals; the total of 716 responses resulted from replies of 77 individuals to two phases of the inquiry. This number included instructors who in some cases also were serving as heads of carreras or departments, and from institutionwide administrators who also were interviewed in their capacity as specialized coordinators. The above numerical summary, of course, does not include the individual interviews, or series of interviews, of staff members of the University of Chile, in Santiago, and of other informed specialists in the same city.

Two difficulties occurred: At the Osorno Center, cooperation was not forthcoming; it was impossible to conduct the planned interviews of Center personnel, and the desired sampling of students could not be obtained. A sample of students at Arica and Iquique cooperated in the study, but at the next six Centers visited--La Serena, Talca, Temuco, Osorno, Antofagasta, and Ñuble--officers of the general student organization informed the directors that they would not approve student participation in the research.

In determining each sample, the decisionmaking responsibility remained with the researcher. The logistics of the visits and the scheduling of interviews precluded the use of a random sample. Consistently, the avoidance of uniform bias or obvious nonrepresentativeness was a factor in forming the sampling groups. The sampling of heads of carreras and departments was based upon consultation with the director, enrollment in the carreras, and their representativeness of the individual Centers, as well as of all Centers as a group. In general, interviews were concentrated in the carreras which had substantial enrollments. For all Centers combined, the effort was made to include responses from a wide range of the carreras. A systematic quota sampling was sought for full-time and part-time instructors in each Center. About a 3:1 ratio of full-time to part-time instructors was obtained in the total sampling, in order to give what was judged to be an appropriate weighting of the relative importance of the two groups in the activities and programs of the Centers. The total sampling constituted 10.7 percent of all instructors; 18.7 percent of the full-time instructors were included. The samplings of instructors included specialists from an extensive range of disciplines and professions and respondents were expected to have at least a year of experience in the Center. Samplings included instructors who had been employed at the respective Center for variable periods of time.

For the student sampling, 2 percent of the total enrollment of the Centers was considered a reasonable objective. An effort was made to secure about the same proportion at each of the eight campuses. The sampling was to consist of students who had completed one year of study at the Center, with subsamples from the second year and later years of various specializations. Furthermore, it was expected that the student sampling at each Center would be derived from two or more different carreras. Responses from graduates of the Centers were obtained by mailed questionnaires, except for a small number of pilot interviews. The lack of current addresses and the short existence of most of the Centers made it necessary to concentrate upon the graduates of recent years. Judging from the questionnaires returned because of incorrect addresses, 727 questionnaires were delivered by mail.

Interviews were arranged with all directors of the Centers and, so far as they were accessible, with all institutionwide administrators directly engaged in educational activities or in services to students. Samples of the parents were obtained with the assistance of directors of secondary schools who provided a systematic sampling

TABLE A

Selected Indicators of Regional Development

Region	City of University of Chile	Population (in thousands)[a]		Percentage distribution of population	Number of manufacturing establishments in region[b]	In Percentages				
		City	Region			gross national product[c]	illiteracy in region[d]	population 7-18 years of age enrolled in elementary & secondary schools[e]	population in urban areas[f]	distribution of public investments, 1964[g]
	Arica	63.1								
Tarapacá	Iquique	65.3	155.9	1.7	25	1.77	7.8	84.7	87.1	5.1
Antofagasta	Antofagasta	117.2	271.2	3.0	14	5.23	7.3	74.3	94.81	3.8
Atacama, Coquimbo	La Serena	48.6	534.8	6.0	8	5.26	20.5	71.0	57.78	9.6
Valparaíso Aconcagua	Valparaíso	279.5	897.1	10.1	90	12.74	10.2	71.3	82.62	11.0
O'Higgins, Colchagua			486.4	5.5	13	4.31	26.2	66.0	45.52	3.4
Curico, Talca.										
Cautín	Temuco	91.3	444.2	5.0	9	2.53	26.5	66.3	38.75	3.0
Valdivia, Osorno	Osorno	69.2	468.8	5.3	37	3.81	21.6	67.5	44.75	6.9
Llanquihue Chiloé, Aísen			361.4	4.1	11	2.75	20.4	66.3	36.94	5.0
Magallanes			85.3	1.0	10	2.19	6.1	72.8	83.2	5.0
Santiago	Santiago	2,313.7	3,038.4	34.2	544	43.52	8.9	73.0	90.00	22.3
			8,887.4				16.4[g]	69.6[g]	68.20[g]	

Sources: Oficina de Planificación Nacional, Politica de Desarrollo Nacional: Directivas Nacionales y Regionales, 1968, pp.39-40; Oficina de Planificación Nacional, Kardex Estadísticas Regionales, Mayo de 1968, Cuadros D51, D52.

[a] 1966 estimate

[b] More than 50 Employees (Obreros y Empleados), 1964

[c] 100% = Gross National Product of Chile, 1965

[d] 100% = Population above 15 years of age, in region, 1960

[e] 100% = Population 7-18 years of age, in region, 1962.

[f] 100% = Total population in region

[g] Figures applicable to Chile

of parents of pupils in the last year of secondary school and by officials at the cooperating University Centers who did likewise for parents of students at the Centers. The sample of prominent residents was developed from suggestions of officials at the Centers and by the initiative of the researcher; a consistent attempt was made to include officials of government and of governmental agencies, leaders in civic and professional activities, owners or managers of business establishments, and directors of educational institutions. In addition to using a broadly structured interview, check responses were obtained to three written questions. Respondents were informed that the inquiry was conducted with the knowledge and cooperation of the local University Center.

In accord with prior planning in the preparation of the instruments, responses to certain questions were refined and tabulated to permit differentiation of individual Centers, full-time and part-time instructors and selected carreras, and also to facilitate comparison of responses from different groupings. When time was available in Santiago, many supplementary inquiries and interviews were scheduled, which provided additional perspective for the study.

TABLE B

The Eight University Centers of the University of Chile

Centers	First year of operation	Area of permanent campus[a]	Enrollment 1970	Number of carreras 1970
Arica	1965	4.1	926	12
Iquique	1965	none	352	6
Antofagasta	1963	13	1,766	18
La Serena	1961	14	1,541	18
Talca	1965	18	1,701	18
Ñuble	1966	none	1,164	13
Temuco	1960	21.6	2,211	22
Osorno	1965	21.6	614	9

Sources: U. de Chile, Secretaría Técnica de Sedes Universitarias, Carreras Universitarias de las Sedes de la Universidad de Chile en Provincias, 1970, pp.13-16; Ricardo Alegría, letter to George Feliz, Jan. 5, 1970, Santiago.

[a] in hectares. (A hectare has an area of 10,000 square meters.)

CHRONOLOGY OF EVENTS IN DEVELOPMENT OF REGIONAL COLLEGES

October 14, 1959	Rector Juan Gómez Millas presented to the Superior Council of the University of Chile a proposal to establish Regional University Centers. The Council approved the basic ideas of the proposal.
March 11, 1960	Professor Eugenio González, dean of the Faculty of Philosophy, University of Chile, submitted to the Superior Council of the University of Chile an elaboration of the first proposal by Rector Gómez Millas. The council approved this document.
July 13, 1960	Following approval by the Superior Council of the University of Chile of founding a Regional University College at Temuco, the Ministry of Education Decree No. 7,348 created the College as a dependency of the Faculty of Philosophy and Education.
1960	The first Regional College began to operate at Temuco and admitted its first class of students.
November 1, 1960	A Regional College at La Serena was authorized by Ministry of Education Decree No. 16,217.
1961	The second Regional College began to function at La Serena.
November 28, 1961	With the approval of the Superior Council of the University of Chile, Rector Gómez Millas created the Department of General Studies by Decree No. 10,544.
December 13, 1962	With the approval of the Superior Council of the University of Chile, and on the recommendation of Rector Gómez Millas, the Ministry of Education Decree No. 18,464 authorized the establishment of three additional Regional Colleges at Antofagasta, Talca, and Osorno, under the direction of the Department of General Studies.

1963	The Regional College at Antofagasta began its activities.
September 1, 1963	Eugenio González became Rector of the University of Chile.
January 28, 1965	The functions of the Coordinating Department of the University Centers were specified by the University of Chile Decree No. 467, in accord with the action of the Superior Council December 2, 1964.
1965	Regional Colleges began activities at Arica, Iquique, Osorno, and Talca.
April 27, 1965	The Regional University Colleges at La Serena, Osorno, Talca, and Temuco were transformed into University Centers of the University of Chile, by Ministry of Education Decree No. 4,859, which also created the Coordinating Department of the University Centers and abolished the Department of General Studies. Moreover, the Regional University College at Antofagasta was consolidated with the University Center of the Northern Zone.
January 6, 1966	In accord with prior approval by the Superior Council of the University of Chile, the University Decree No. 67 provided that the University Centers be responsible directly to the rector, that their operations and organization be in charge of a Superior Council of the University Centers, and that functions of the Coordinating Department of the University Centers be modified.
January 29, 1966	The University Center of Ñuble was established by Law No. 16,419.
1966	The University Center of Ñuble, at Chillán, began activities.
January 12, 1968	By University of Chile Decree No. 442, the general secretary of the University Centers was established.

April 2, 1969	In accord with the action of the Superior Council of the University of Chile, December 12, 1968, the Technical Secretariate of the University Centers was created by Ministry of Education Decree No. 3,004, which also abolished the Coordinating Department of the University Centers.
April 6, 1970	The University Centers were transformed into campuses of the University of Chile, by Ministry of Education Decree No. 1,186.

GLOSSARY

asesoría	professional consulting services
BID	Banco Interamericano de Desarrollo (Inter-American Bank for Development)
bienestar estudiantíl	student welfare
carrera	approved course of study which leads to a university degree in a specialization or an occupational field
carrera corta	approved course of university study which has a duration of less than four years
carrera larga	approved course of university study which has a duration of four or more years
carrera paralela	approved course of university study which has the same plan of study and leads to the same degree as in one of the professional schools of the University of Chile in Santiago
carreras técnicas	approved courses of university study, and specifically the official identification of intermediate-level or short-term specializations which the Regional Colleges offered when they were transformed into University Centers
centro universitario	University Center, specifically any one of the Regional Colleges of Chile after their first transition in 1965
colegio	school; also a reference to the colegios regionales (Regional Colleges); also an association of professionals in a given field
colegio universitario regional	Regional University College, or Regional College of the University of Chile, full identity of the Regional Colleges, sometimes known as University Colleges

Consejo Superior de la Universidad	Superior Council of the university, the principal governing and policymaking body
Consejo Superior de Centros Universitarios	Superior Council of the University Centers, which recommends policy to the university's Superior Council, advises the Rector, and considers matters of general concern to the University Centers
CORFO	*Corporación de Fomento de la Producción* (National Corporation for Development)
DEG	*Departamento de Estudios Generales* (Department of General Studies), Universidad de Chile
DCCU	*Departamento Coordinador de Centros Universitarios* (Coordinating Department of the University Centers), Universidad de Chile
educación básica	basic, or elementary education
educación media	middle-level education, including secondary schools and vocational schools of a comparable level
educación secundaria	secondary education most characteristic of public and private institutions, and until recently considered mainly as preparation for the university
Facultad	Faculty, a major division of the university; includes professional schools, departments, and institutes in related fields
INSORA	Instituto de Organización y Administración (Institute of Organization and Administration), Universidad de Chile
Junta Nacional de Auxiliar Escolar y Becas	National Board for Student Aid and Scholarships
ODEPLAN	Oficina de Planificación, Presidencia de la República (Office of National Planning)

orientación	guidance
pedagogo	state teacher, one licensed to teach
perfeccionamiento	program of professional development for practicing professionals
sede	campus or branch of the university; official status of the University of Chile Centers in the provinces beginning in 1970
sedes de provincia	campuses or branches of the University of Chile in the provinces
STCU	Secretaría Técnica de Centros Universitarios (Technical Secretariate of the University Centers), Universidad de Chile
técnico	one who is qualified for an occupation requiring a certain level of education, command of specialized skills, and general competence in the specialty; education is usually four years of secondary school and at least two years of the university
título	certificate of graduation, as a professional degree from a specific carrera of the university
Universidad	University, either the institution of higher education as it exists in Chile, or the University of Chile, depending on the context

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